

MANUFACTURERS' RECORD

A WEEKLY REVIEW OF THE IRON, STEEL, METAL & HARDWARE TRADES.

AND A MANUFACTURING AND TEXTILE PAPER, DEVOTED TO THE UPBUILDING OF SOUTHERN MANUFACTURES AND THE DEVELOPMENT OF THE MATERIAL RESOURCES OF THE SOUTH.

VOL. 6. No. 23.
WEEKLY.

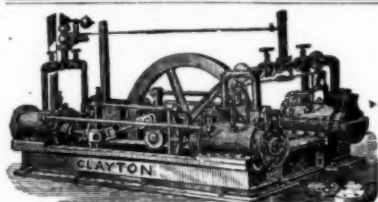
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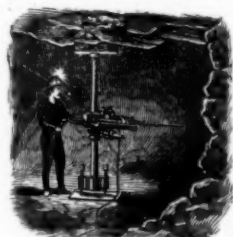
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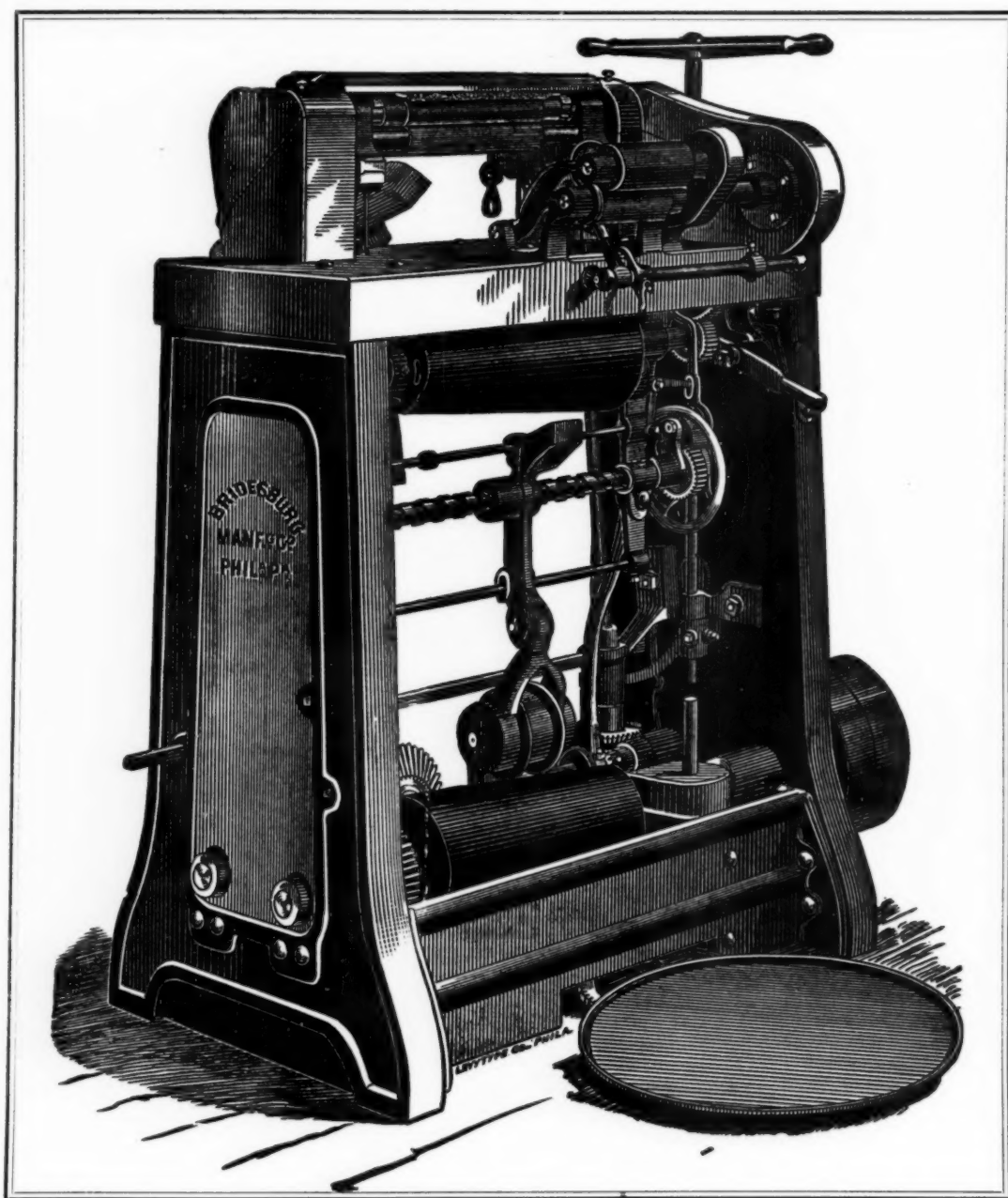
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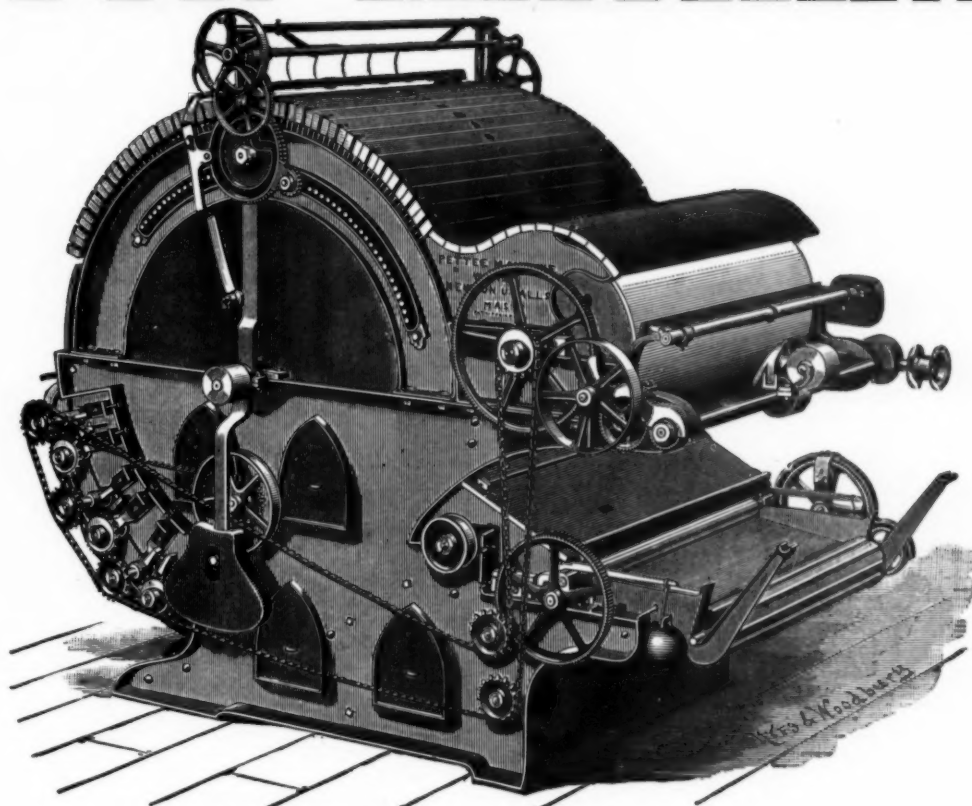
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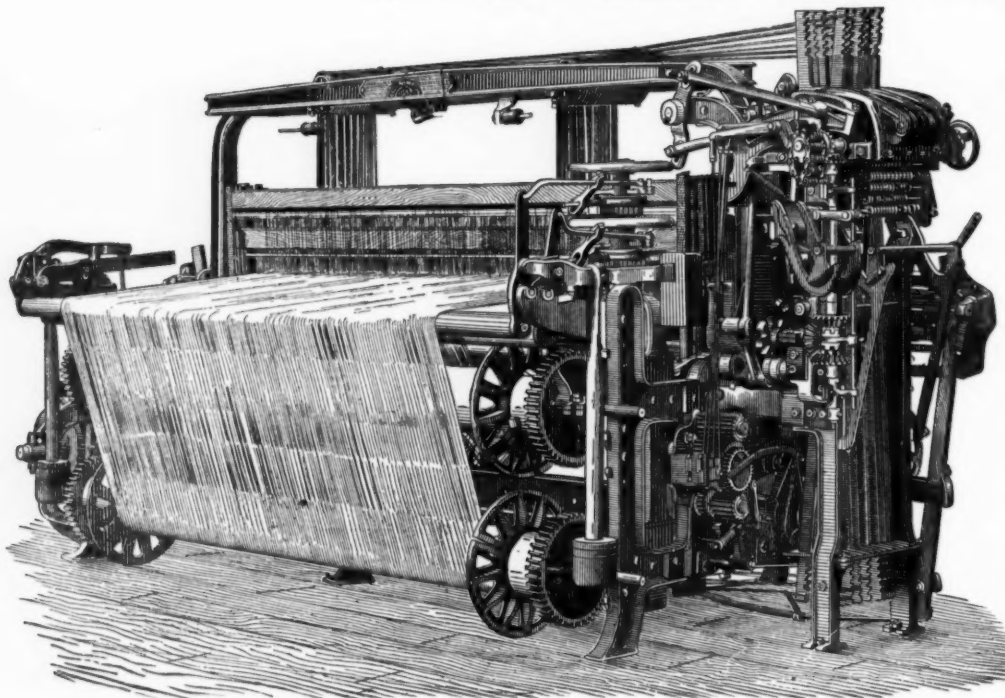
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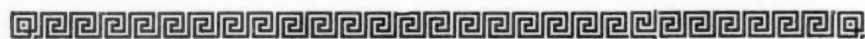
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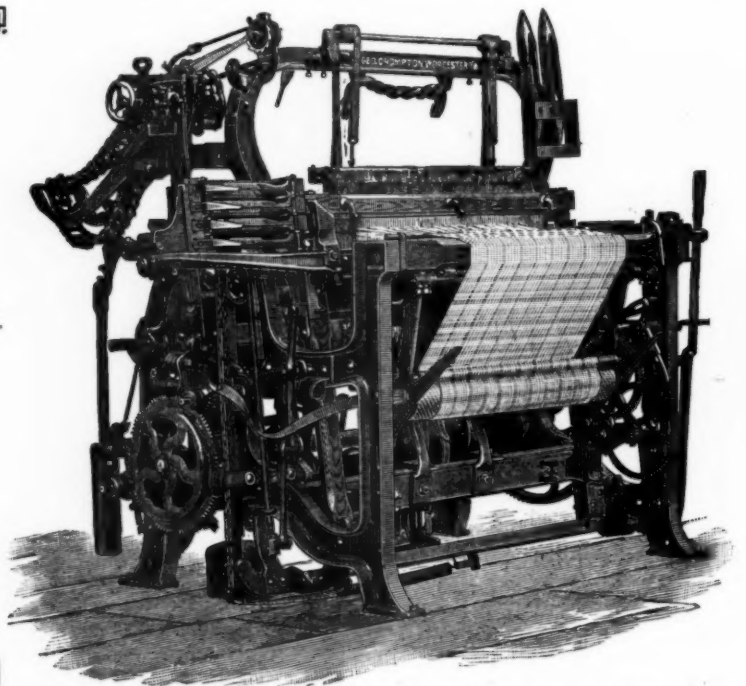
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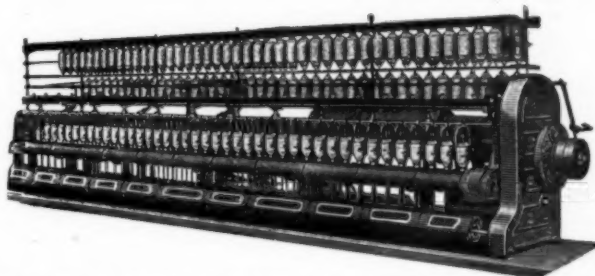
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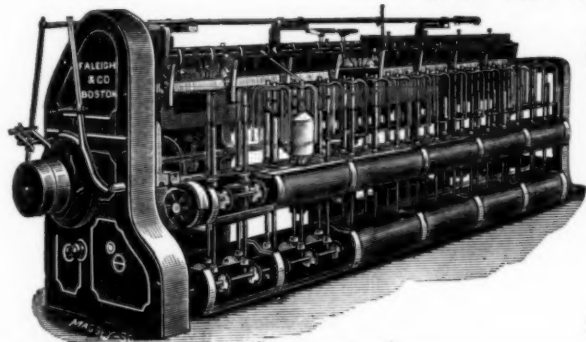
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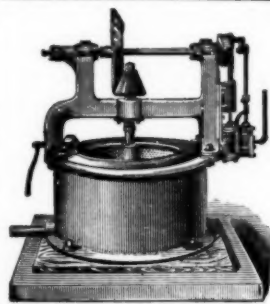


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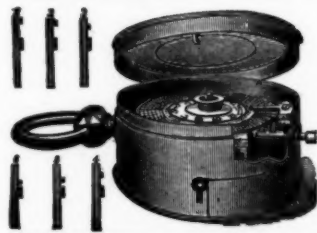
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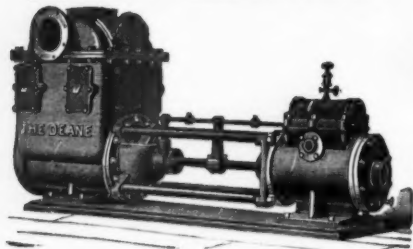
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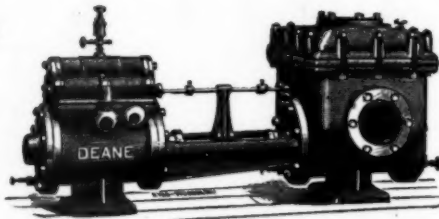
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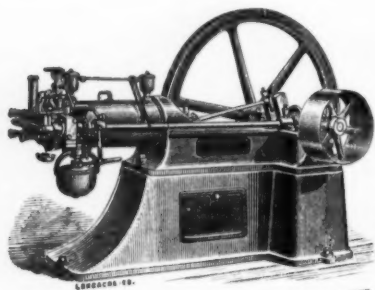
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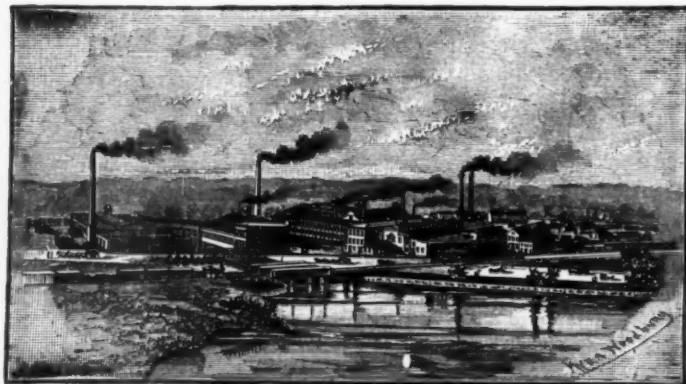
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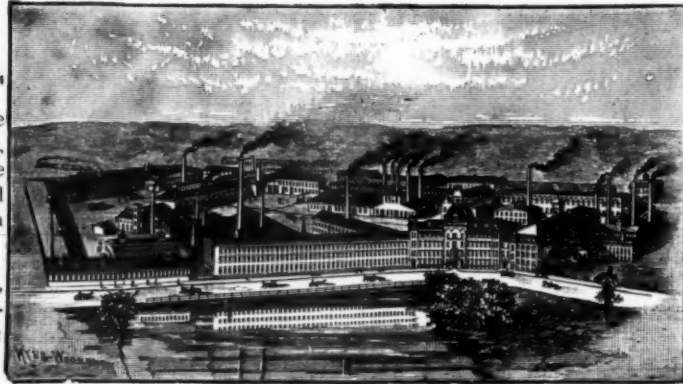
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BALTIMORE, JANUARY 17, 1885.

CORRESPONDENCE relating to the manufacturing, mining, lumbering and all other material interests of the Southern States is solicited. We invite those interested in the development of the South to make free use of our columns. Reaching so many capitalists in all parts of the United States seeking profitable investment in the South, the MANUFACTURERS' RECORD offers an excellent chance for the people in that section to place the advantages of each locality before those likely to be interested. We will take great pleasure at all times in telling what has already been accomplished in the South, and showing up the opportunities of doing still more,—so if you desire to attract immigration or capital, or if you know of an opening for profitable investment in manufacturing, mining or kindred pursuits, write us an account of it. It will be published free of cost.

THE Mackay-Bennett cable is the business men's hold for cheap telegraphy. None of the chief owners of this ocean line are men who "sell out."

Our readers will confer a favor upon our advertisers and upon us, as well as benefit themselves, if, whenever they write to anyone advertising in this paper, if it is only for a catalogue, they mention that "your advertisement was seen in the BALTIMORE MANUFACTURERS' RECORD." A careful compliance with this request will be much appreciated.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year, or six months for \$1.50.

Technical Education at the South.

One of the greatest needs of the South is the education of its people in mechanical ways and means. There is now no doubt possible but that the strength of this section is to lie in its manufactures; and, in the mechanical part necessary to the development of these manufactures, it is not meet that the skilled labor should so generally come from outside our borders, and our own laborers be confined to the hewing of wood and drawing of water.

It is true that throughout the South we have many skilled native mechanics who have taken high part in the developing of our industries; but these are too few in number to affect the general fact that our mechanical native workmen are without the education that should be theirs. To a great measure, this is true of the North, East and West, but the older industrial centres of the country are waking to the fact of their necessities, and are beginning to make proper provision therefor. It is time that the South followed in the same direction. It must be remembered that our people have never been mechanical, and a sudden adaptation to new lines cannot be expected to result in any high degree of perfection. The more necessary, therefore, that the young men of the South are furnished with all means possible to fit them for the industrial conflicts of the future.

We believe that the people of the South are both willing and anxious to support a general system of manual education, whether the same be under State or municipal authority, and an enlargement of our school system in this direction cannot fail to be both popular and beneficial.

The situation is a peculiar one. It is not as though our young men, after undergoing engineering and mechanical training, were compelled to seek work in some far-away sections, where employment at the best would be uncertain. For years to come, Southern engineers and mechanics will find their hands full of employment at home. The South possesses the great advantages of entering upon a new era, with none of the drawbacks consequent upon the development of a new country, and with its sources of industrial revenue clearly outlined. There can be no lack of work for the hands of its sons, provided they are capable of mastering the task. There will be new lands to be prospected; new mines to be opened and developed; new furnaces and new mills to use up the metal richnesses of the earth; new factories to manipulate the fertile crops of the soil; new machinery to cultivate and secure the agricultural crops; new railways to be built and new rolling stock to furnish them with; and a thousand lines of new industries opening up to occupy the engineering, mechanical and inventive skill of our people. The prizes are worth contesting for; the means of contest easy and lying

ready to our hands. Shall we put forth our hands and use them?

We do not want these schools established merely for the ordinary purposes of manual training. We do not want to see our mechanics fitted only to handle tools and machinery. We want to see them able to make the tools and build the machinery. The apprentice system has fallen sadly into disuse throughout the country; but, even with it in force, it would not meet the needs of the South as they exist to-day. The degree of skill demanded in all lines is high, and the only way to secure it is through liberal, free, technical education. It is an error to contend, as many do, that mechanics are born, not made. A "tinker" may be born, but a mechanic is made, and made only through close application and study of the laws that govern the swing of a hammer, as well as the automatic adjustment of delicate machinery.

We do not admit that the great inventors of the world have been men uneducated in mechanics; they have uniformly been poor men, but not poor mechanics. The best achievements of the world's history have been accomplished by its educated men, and if we desire proper development of the blood and brain forces of the South in its rapidly advancing industrial development, we should see to it that these technical schools are spread from Maryland to Texas. Our manufacturers and home capitalists owe it as a duty to themselves that they take hold of this matter. There is no measure of philanthropy in it. It is a strict matter of business, and the manufacturers and business men of the South should so consider it, and act accordingly. We have far too few of such institutions, and there need be no holding back from fear of "overstocking the market."

THE question of arbitration is attracting more attention recently than ever before. There seems to be a determination on the parts of employers and workmen to do away with the old system of strikes. This latter has grown too expensive of late years, and the unions are realizing that they are slowly losing ground with no other weapon than this. Hence, strong movements are being made to devise some means of settling disputes satisfactorily to both parties concerned.

THE Engineering News has compiled the following table, showing the different gauges in use on air railways, and the number of roads using each, with the respective mileages:

GAUGE.	ROADS.	MILEAGE.
6 feet	9	38
5 feet 6 inches	5	76
5 feet 3 inches	1	3
5 feet 2 inches	1	3
5 feet	47	11,478
4 feet 9½ inches	1	57½
4 feet 9 inches	35	11,631
4 feet 8½ inches	8	1,280
4 feet 8 inches	309	95,649
4 feet 3 inches	3	75
4 feet 1 inch	1	5
3 feet 6 inches	9	514
3 feet 4 inches	1	9
3 feet 2 inches	1	48
3 feet	108	8,672
2 feet	2	34

EACH succeeding financial quarter renders more evident the necessity of a National Bankrupt Law. The deferring of this question from session to session is not only a shrinking from duty on the part of Congress, but is a positive and growing detriment to the interests of the general business community. The imperfect legislation upon the subject in some of the States is worse than useless, as these local laws invariably protect the debtor, without giving any security to the unpreferred creditor. We do not want a one-sided legislation of this kind, and, besides this drawback, the laws of one State do not work in any other State.

We need a National Law that will cover all the States under a uniform system, and that will be alike just to the debtor and creditor. We do not believe that the tendency of such a law is to dishonesty, nor do we respect the opposition that comes upon the ground that "honest men do not want it." We believe in the passage of such a law for the protection of honest men. Rogues will protect themselves. We do not believe in the practice under the laws of some of our States of keeping a debtor, who has legitimately and honestly lost his all, down to the grindstone of fate, until he shall have earned sufficient to cancel his debts with interest. Such a system tends to make honest men rascals, and at the same time we see no advantage it gives to creditors that they did not enjoy under the old British system of imprisonment for debt.

We believe the great majority of our business men to be favorable, and strongly so, to the early passage of the Lowell bill, or some measure of kindred significance. Legislation of this character will cover the whole field, will deal justly between creditor and debtor, securing the rights of both, and will do away with the unjust system of preference and unhealthy practice of mercantile slavery.

THE Manufacturers' Gazette, of January 3, says: "We understand, from private source, that a very careful experiment has been tried at some cotton mill in New Hampshire, where the combination of spirits of wood, grain, of methyl or methylated alcohol has not been a success, and that one at least of the parties prominently identified with it has very important business somewhere in the Southern States. We hope the president of the Boston Manufacturers' Mutual will, when thoroughly satisfied, make such report as he thinks should be made in case it is a matter outside of the underwriters or for the public good. One thing is certain, it has not as yet received any broad adaptation or application."

A NATIONAL Convention of Land Agents will be held in New Orleans on the 20th of this month. It is expected that over 3,000 will be in attendance. All real estate agents are invited to be present.

Notes * From * Dixie.

BY CHAS. H. WELLS.

The new Greenville and Laurens Railroad in South Carolina is to be consolidated with the "Midland Railroad," to the end that a through line between the up-country and Charleston may be secured. At present the Midland Railroad is all on paper, but the men in charge of the scheme are reliable and say that the road will be begun at an early day. The road is to be pushed to Asheville, N. C., and thence to some point—yet to be determined upon—on the Norfolk and Western Railroad. The line from Greenville to Charleston is to be completed by September first. The advantages that new line would enjoy are incalculable.

Despite the assurances of Mayor Courtenay, of Charleston, that the new Midland road will be built at once, there are many obstacles to be overcome. The Clyde syndicate holding the Greenville and Columbia Road—which would be about killed by this new short line—will no doubt offer many impediments and retard the completion of the Midland as much as possible. An entrance into Columbia and Newberry will have to be arranged for—and all these things take time. There are but seven and a half months intervening between now and September first. Why does not the Greenville and Laurens Road insist that the Midland Company shall at once lay the rails on that road which is now all graded? And then let the work be pushed vigorously between Laurens and Columbia. That much might be completed by September first—but *all* the work cannot possibly be done in the length of time that the directors have fixed.

To tell the truth, the present condition of railway affairs in South Carolina is not at all encouraging. The "Railroad Commission" has proved an intolerable nuisance to freight and passenger agents, and of very little benefit to the people. A capitalist does not care to invest money in a State which says to him: "You may acquire property if you like, you may spend all the money you please, you may turn the desert places into gardens of beauty, but you cannot manage your property according to your own notions; of course it is *yours*, but *we* will manage for you so it will also help our interests." Suppose the legislature should pass a bill preventing property owners from charging more than \$10 a month rent for a house—no matter how much the building cost; would the bill be equitable? No indeed; there would be one general howl from Dan to Beersheba,—and yet a bill that is just as onerous, just as unfair, still remains un repealed.

Any law that takes away from a man the absolute management of his own business is infamous. If unjust to a man why not equally unjust where the sufferer is a corporation? What would be the result if several great corporations like the Richmond and Danville, East Tennessee, Virginia and Georgia, Central of Georgia, Louisville and Nashville, and "Queen and Crescent," should combine and say: "Now we will suspend all operations in South Carolina until the commission law is repealed." It would not be ten days before the people would rise *en masse* and demand the instant repeal of the law. Why? Because the trains would whizz through the State without stopping—freight and passengers would have to be transported (as in the *ante*-railroad days) by wagon. Thousands of bales of cotton would rot on the station platforms, since the railroad would neither bring in or carry away freights. In other words any six of the great railroads of the South can combine and could bankrupt three-fourths of the population of any district against which they

centred their force. Some of these days this policy may be adopted; then lookout for "plague, pestilence and famine, battle, murder and sudden death," as the prayer book fitly puts it.

The recent failure of the directors to pay the interest on the income bonds of the East Tennessee, Virginia and Georgia Railroad, has resulted in the appointment by Judge Baxter of Major Henry Fink, of Knoxville, Tenn., as receiver. Major Fink comes from a famous family of railroaders—Albert Fink is commissioner of the great Trunk Line Pool, of New York, a most important office; Rudolph Fink is receiver of the Memphis and Little Rock Railroad, and now the youngest brother of the trio steps into line as receiver of one of the leading corporations of the South. Mr. Fink has been general manager of the E. T. V. & G. system under the Brice-Thomas regime, and in that position has evidenced that wonderful executive ability for which his family is distinguished.

A gentleman from Massachusetts wants to know "something about the timber interests of Georgia, the principle dealers, amount of capital now invested, etc." The principal dealers are J. K. Clarke & Co., McDonough & Co., D. C. Bacon & Co., R. B. Reppard and Dale, Wells & Co., Savannah; W. J. Willingham and M. F. Amorous & Co., Atlanta. These firms own and control almost the entire saw mill interests of the State. The principal mills are on the lines of the Georgia Pacific, Western and Atlantic, Central of Georgia, East Tennessee, Virginia and Georgia, Savannah, Florida and Western and Brunswick & Western Railroads. Total amount of capital now invested about \$10,000,000. Next!

Just now the New Orleans Exposition is the Mecca toward which the feet of all Southern tourists are turned. The Northern press has not given this exposition its just dues; it compares more than favorably with the great Centennial of '76, (at which I spent some time,) and when the exhibits are all in place,—which will be about the middle of February, from present appearances,—the exposition bids fair to be the finest industrial and agricultural exhibit ever made on this continent. The South is forging ahead; let calumniators rave; let politicians spout; let the metropolitan press continue to misrepresent; the South will, Phoenix like, rise from the dead ashes of the past full of new vigor, new hopes, new courage, new aspirations.

No less than 300,000 sensible American citizens have conceived the idea of going to New Orleans on or about the 14th of February, so as to see the exposition and take in the great Mardi Gras at the same time. Well, the Crescent city will be a sight to behold on Shrove Tuesday. I was there last year—when there was no outside attraction—and the crowd was so dense that, accustomed as I am to crowds and to being jammed in the "madding throng," it was with extreme difficulty I managed to get about. What, oh! what will it be this year and where will the people find accommodations? Texas alone will, it is estimated, send in 50,000 excursionists Mardi Gras week; Missouri and Arkansas are good for 25,000 more; then take in the crowds that will come in by the "Queen and Crescent" and the Louisville and Nashville roads!

The trade of New Orleans is, they say, a barometer of Southern industry and commerce. The value of domestic produce in the city in 1881-82 was about \$149,000,000. In 1882-83 it was over \$200,000,000. Judge Terrill, (owner of one of the largest cotton compress establishments in New Orleans,) is

authority for the statement that in 1883-84 the value was not less than \$235,000,000. In these times of depressed trade, with manufacturing and mines at the North suspending operations, such news comes with peculiar gratification. The value of exports of domestic produce to foreign countries—from New Orleans—has increased about sixteen *per cent.* during the past thirty-six months. The value of real estate in the city still continues to go up and many sales have, of late, been made at very fancy figures.

The tree planting question is being revived in parts of North Carolina, and it is to be hoped some good results may follow. Farmers could plant black walnut trees wherever fences are needed and then string the barbed wire to them instead of to posts. At the end of fifty years the black walnut trees would be worth more than the farm itself. Wood in France to-day sells for $\frac{1}{2}$ of a cent a pound, which is more than corn sells for in Kansas, by the pound, this year. The wanton destruction of Southern forests is a great mistake, and legal measures should be taken to prevent a foolish waste. In one hundred years the climate of the South will have undergone a complete change, owing to the timber felling which is now being conducted on such a large scale.

DRIFTWOOD.

All communications to be answered through the "Dixie Notes" column must be sent to box 160, Greenville, S. C.—Work on the Asheville and Spartanburg Railroad is to begin as soon as the law suit between the bondholders and the contractors, (now before the U. S. Supreme Court,) is decided. —A number of Northern families came South last month and took up homes in Swain county, in Western North Carolina. —The line of the new Cape Fear and Yadkin Valley Railroad will soon be complete to Mt. Airy. This promises to be one of the most important roads of the South in a few years, since it has both ability and money behind it. —A fine mill property in Western North Carolina is for sale by the Hon. M. O. Sherrill, State Senator, Raleigh. —It is claimed that the widow of the late President Garfield owns a paying gold mine in Stanley county, North Carolina. —The great hotel at Warm Springs, N. C., that was recently destroyed by fire will probably not be rebuilt this year. A modern hotel with modern management is needed at that place. —A movement is said to be on foot, backed by capital, to make Brunswick, Ga., a rival to Savannah as a shipping point.

Knoxville, Tennessee.

Editor Baltimore Manufacturers' Record:

You are not aware, perhaps, that Knoxville, situated in East Tennessee and on the banks of the Tennessee river, contains a population of twenty-six thousand inhabitants and that it is increasing at the rate of two thousand per annum. It is verily so, and a more prosperous and progressive city is hard to find in any portion of the South. It is compactly built, substantial business houses on the principal thoroughfares and imposing residences in all parts of it. Here the University of Tennessee is located, standing upon a high eminence, surrounded by a beautiful campus, containing some forty acres, nice carriage ways and private walks, shade trees and shrubbery, and overlooking the Tennessee river and the distant peaks of the Unika chain of mountains on the south and the Cumberland range on the north.

Our common or free school system is not a whit behind the best schools of the country, North or South. There are eight large school buildings, well built and with capacity enough to accommodate five or six thousand children. They are (the schools) thoroughly organized, with an able superintendent and an efficient body of instructors. Ample provision is made for the education of the colored children, and there is an institution known as "Knox-

ville College," in which teachers are qualified to teach their race. It is a normal school. Here every year quite a number, male and female, are prepared for their duties and go out into the rural districts to take charge of colored schools.

Knoxville is in the centre of an extensive region and therefore commands an immense trade, and trade of every description. For more than two hundred miles on all sides, including portions of Kentucky, Virginia, North Carolina, Georgia and Alabama, this trade penetrates. Fabulous quantities of goods and manufactured products of every description ramify the region indicated. The result is that Knoxville has an extensive and lucrative jobbing trade amounting to millions of dollars. One dry goods house alone foots up more than two millions annually.

Knoxville is destined to become a great manufacturing centre. It is obliged to be, owing to the fact that it is contiguous to a marvellous belt of coal and iron and reached by railways. In many instances the coal and iron lie side by side. There is every species of iron from the fossiliferous deposit to the splendent magnetic one of the famous Cranberry mines, which is regarded by those competent to judge as the finest deposit of iron ore on the continent. It makes the best of steel, and thousands of tons are now being shipped to Philadelphia and other Eastern cities. The wonder is that capital has not found its way to this city to embark more extensively in the manufacture of iron inasmuch as it lies so convenient to these immense deposits of coal and iron ore.

Knoxville, however, is not without manufactures. There are several here that would be creditable to any city of like pretensions. We have one rolling mill with a heavy capital and turning out a number-one article of iron and nails, inferior to none in the market. We have several foundries, one can factory, one car wheel establishment, several sash and blind factories, furniture factories, &c., &c. There is room for more.

Steel works would do well here; they would be in the midst of all the necessary material and accessible to all the markets of the country. The best of iron ore is convenient and coal in the largest abundance. The writer is now corresponding with a steel works company doing business in Pennsylvania, which is likely to settle in this city at no distant day.

There are thousands of acres of mineral lands for sale in East Tennessee and which can be bought at a reasonable figure. Cumberland range of mountains, dividing East Tennessee from Kentucky, is full of the finest bituminous coal and abounding in immense deposits of iron ore. Frequently they lie side by side. Meantime this extensive mountain range is covered with timber, such as poplar, pine, hickory, ash, cherry, &c.

I know of no section of this Union where capital could be more advantageously used. The wonder is, it has not sought investments here more than it has. There is ample room for blast furnaces, rolling mills, foundries and the like.

Here in the great basin of East Tennessee, in the midst of fertile valleys and the most salubrious climate on the face of the earth, thousands of Northern citizens may find comfortable and cheap homes. For more than six months in the year they are closed in by inhospitable winters and compelled to submit to their intense rigors. Not so here. Our winters never last more than three and a half months, and are uniformly mild and pleasant. There are no malarial influences at work to produce disease and to undermine the constitution. Pure water and pure air combine to make this the healthiest section on the continent.

Persons desiring information concerning this highly-favored region can obtain it by addressing the undersigned.

C. W. CHARLTON.

KNOXVILLE, TENN., Jan. 10, 1885.

Outlook for the Cotton Trade.

NEW YORK, Jan. 3d, 1885.

DEAR SIR—When we issued our annual circular in September last the market for cotton and cotton goods was very depressed. In that circular, after giving some reasons why a more cheerful view of the situation should be taken, we remarked that there was no probability that the growing crop would be a large one, and we ventured to predict that before the end of the year the whole situation might change for the better. It is a limited now that the crop cannot much exceed that of last year while it may fall short of it, and in prices a marked rise has taken place.

The statistical position of cotton to-day as compared with previous years is as follows:

	1885.	1884.	1883.
Receipts at U. S. ports since Sept. 1st.....	3,665,360	3,536,454	3,657,391
Total exports since Sept. 1st.....	2,324,001	1,028,437	2,260,129
Stock in U. S. ports.....	1,014,018	1,276,570	964,055
Stock in Liverpool.....	624,000	679,000	710,000
Afloat for Gt Britain.....	287,000	354,000	367,000
TOTAL VISIBLE SUPPLY in U. S., Europe, and at sea.....	3,994,253	3,444,671	3,179,765
Price of middling uplands in New York.....	11 1/8	10 5/8	10 1/2
Price of middling uplands in Liverpool.....	6	5 15-16	5 11-16

PRICES OF COTTON, BASIS MIDDLING, FOR FUTURE DELIVERY, IN NEW YORK:

January delivery.....	11.16	10.72	10.
February ".....	11.14	10.69	10.11
March ".....	11.25	11.06	10.24
April ".....	11.39	11.21	10.38
May ".....	11.52	11.35	10.52
June ".....	11.64	11.48	10.66
July ".....	11.75	11.57	10.75
August ".....	11.85	11.66	10.87

The stock in Liverpool is 75,000 bales less than last year and 106,000 bales less than in 1883.

Stock in U. S. ports is 262,452 bales less than last year and 50,063 more than in 1883.

The foregoing statement also shows that the total visible supply of cotton in the world is 350,418 bales less than last year and 98,912 bales less than in 1883.

This decrease in the total visible supply is owing to the enormous consumption of cotton, which is fully as large as it was last year and larger than in 1883.

The export demand for our cotton has been very great at this season, for although general business throughout the world has been dull for some time and a heavy shrinkage in values of all kinds has occurred, and although some leading products have been over-produced, the present position of cotton is strong.

Receipts at the U. S. ports have been free, but great stringency in money matters in the South, an unusually fine picking season and perfected means of transportation, have all combined to cause an early movement of the crop. So free a movement out of a crop of but moderate size must cause a more than usually abrupt falling off in receipts at an early date.

In view of all these facts, it is clear that the question of the cotton supply for the coming year is of great importance. That the acreage will be as large as it was last year is unlikely. The financial condition of the planting interest South is such that a large outlay of money is necessary to make the new crop, but it is almost certain that the prevailing depression in business and the timidity of capital will cause merchants and factors to greatly lessen their advances, and in some instances to cut them off altogether. This will have an immense influence on the planting, and may have on the price in the spring.

To sum up the situation in a word, many mills have been closed or running short time; stocks of goods have greatly diminished; the demand for cotton will continue large, while the supply will grow smaller as the year goes on. General business is likely to improve, and cotton is an article quickly affected by any improvement in trade.—The price of cotton is comparatively low now, but it is not unlikely that a steady and marked advance will take place in it as the season progresses. Yours truly,

LATHAM, ALEXANDER & CO.

Improved Self Feeding Rip Saw.

The machine illustrated on this page, and which is one of the latest designs of the well-known manufacturers of wood-working machinery, The Egan Company, of Cincinnati, Ohio, embodies several important improvements in construction over any machine of the kind heretofore introduced. All its parts are arranged in as simple and convenient a manner as possible, thus lessening the liability to get out of order, while the machine is made so strong as to stand up to its severe and rapid work in an admirable manner. It is entirely self contained, has four different rates of feed and can be readily changed from a self-feed to a hand-feed machine when so desired. For full details of capacity and construction we invite the attention of our readers to the following extract from the company's catalogue, merely stating that the drawing pulley is now made 6 1/2 inches diameter, and the mandrel is provided with a good outside bearing which enables the machine to do very heavy work with ease.

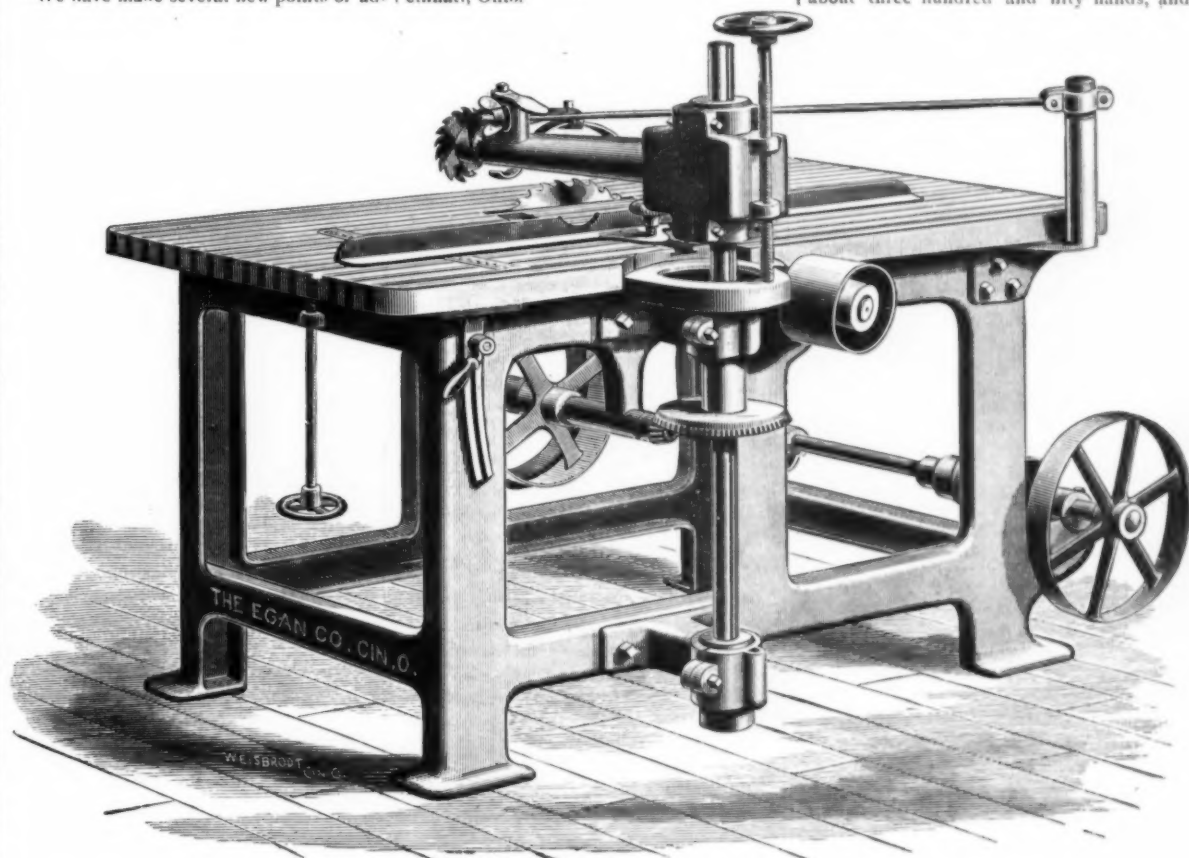
"We have made several new points of ad-

The cast steel mandrel is of best crucible steel, running in self-oiling boxes. The pulley or mandrel is 6 1/2 inches diameter, and 6 1/2 inches face, and should run 3,000 to 3,500 revolutions per minute, according to size of saw used. The mandrel is also provided with heavy outside bearing, not shown in cut, which adds much to capacity and steadiness of machine.

This machine will rip any kind of wood, either hard or soft—taking the place of the common rip saw for hand use—and the feed is so powerful that it will do the work of from three to six men, and do it cleaner with no jerks or resting marks on the cut. Planing mills, furniture, chair and bracket and moulding factories, and all parties wanting quick ripping of strips, or any ripping of any kind will find it a great labor saver.

There is no danger of operator getting his fingers cut, and no danger of the board flying back, as the boards are held firmly on each side of cutting saw by a spring. Several saws can be used on mandrel if necessary for sawing blind slats or work of that class."

For further information write to The Egan Company, 228 to 248 W. Front street, Cincinnati, Ohio.



IMPROVED SELF FEEDING RIP SAW.

To Southern Inventors.

Many Southern inventors have heretofore been prevented from introducing various devices to the public by a want of means to pay the necessary fees for procuring letters patent therefor. This drawback has, however, been in part set aside by the liberality and inducements offered by Messrs. Hurdle & Steiger, who are carrying on a general patent soliciting business, their office being in the Tribune Building, New York City. In order to receive the patronage of Southern inventors, they offer to prepare and prosecute applications for letters patent at reduced rates and to give the inventor time for making payments. These inducements are very favorable to inventors. These gentlemen are expert mechanics and have both the ability and facilities for designing machinery of all kinds. Attention is called to their card in this paper.

If you are not already a subscriber to the BALTIMORE MANUFACTURERS' RECORD, send us \$3 and you will receive it regularly for one year or six months for \$1.50.

DR. WEDDING, in his recent work upon the basic process, shows that there are now in existence 31 distinct works, having a total of 88 converters and an output of 797 tons. Of these, Germany has 13 works, with 41 converters and a capacity of 369 tons; there are 6 in Great Britain, with 19 converters and 188 tons capacity; France has 5 works, with 13 converters and 124 tons capacity; Austria has 3, with 7 converters and a capacity of 44 tons; Belgium has 2 works, with 4 converters and 32 tons capacity; Russia and the United States have each one work, each having 2 converters and 20 tons capacity.

The Druid Mills at Woodbury, Md., owned by Gambrill & Sons, which have been running twenty-seven hours per week for several months past, will hereafter run twenty days a month. These mills employ about three hundred and fifty hands, and

the increase of running time will have the effect of putting at least \$10,000 more per month in circulation in the town. It is understood that the Mount Vernon Mills, employing six hundred and fifty hands, with a monthly pay-roll of about \$20,000, have secured a number of large orders, and will make full time for some time to come.

AMONG the recent large orders taken by the Egan Company, of Cincinnati, Ohio, was one for a complete outfit of improved wood-working machinery for the car shops of the Baltimore & Ohio Railway at Glenwood, Pa. This order comprised nearly all the machines used in the manufacture of fine passenger coaches, and was secured after a spirited competition between the leading producers of this class of machinery in the country. This railway company showed their appreciation of the Egan Co's improved universal wood-worker by taking two of them, one going to their shops at Mount Clare. This is but another evidence of the high state of perfection to which this enterprising company have brought their goods, and they are to be congratulated on their success.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

A company from Pennsylvania are negotiating for a tract of four thousand acres of land near Eden, Ala., and will soon begin work in mining coal.

The Black Warrior Coal Company has been organized at Montgomery, Ala., with capital stock of \$250,000. The company owns eight thousand acres of land and are buying more.

Messrs. Bains & Herring, of Birmingham, Ala., have received a letter from a firm in Pennsylvania, asking about the prospect there for glass works.

The Gulf Coal and Coke Co., of Mobile, Ala., have increased their capital stock from \$200,000 to \$350,000.

A new saw mill is being built on Murder Creek, six miles north of Brewton, Ala., by a company composed of Joseph and I. J. Poley, Dr. Kindal, F. M. Nichols and A. M. Patrick. Capacity will be 25,000 feet a day.

Part of the machinery for the Birmingham Fire Brick Works has arrived. A large mill house is being erected and the old ovens are being replaced.

Several wealthy gentlemen, of Gadsden, Ala., are thinking of establishing gas works.

The Stockton Lumber Company, Mobile, Ala., has been formed by the election of directors who have elected Mr. Geo. W. Robinson President and Mr. B. F. McMillan Secretary and Treasurer. The company has purchased the Robinson & McMillan mill at Stockton, and will manufacture lumber and shingles.

M. L. Potter, of Brooklyn, N. Y., has bought 40 acres of mineral lands near Jonesboro, Ala.

The Bibb Branch Coal Co., of Birmingham, Ala., have increased capital stock \$15,000.

The contract for the railroad to be built from Jacksonville, Fla., to Gadsden, Ala., will be let at once.

Jefferson county, Ala., will probably erect a new Court House.

FLORIDA.

The Florida Midland Railway and Navigation Co. will be incorporated.

Mr. McLauren will move his saw mill from present site, near Kissimmee, Fla., into the city.

Mr. Allday will start a tannery at Jacksonville, Fla.

J. E. Hart, of Jacksonville, Fla., has decided to rebuild his mill lately burned. Ellis & McClure are engaged in drawing plans. New mill to be duplicate of old one.

GEORGIA.

H. R. Brown, secretary and treasurer of the Macon, (Ga.) Street Railroad Company, invites proposals for 150 to 300 tons of iron or steel rails, delivered in Macon.

Brunswick, Ga., is to have gas works, the City Council having made a contract with a New York company to erect them.

Glynn county, Ga., will erect a new jail.

A project is on foot to build a large hotel in Brunswick, Ga., costing \$100,000, and to contain 200 rooms.

There are good prospects for a machine shop being established in Hawkinsville, Ga. Mr. H. S. Holdridge, who has had the enterprise in contemplation for some time, has purchased an eighteen horse power engine, and is making other arrangements to establish the shop.

The Soque Woolen Mill Company at Clarksville, Ga., will put up a grist mill at their factory in the near future.

The Board of County Commissioners, Savannah, Ga., are advertising for plans for a jail, to cost about \$60,000; also for construction of same.

There is some talk of starting a rope factory at Montezuma, Ga.

An English party are on the way to look at the Smith gold mining property in Rabun county, Ga., with a view of purchasing and working on an extensive scale.

Augusta, Ga., is agitating the question of an electric fire alarm.

Hunter & Co. have started a planing mill at Lake Josephine, Ga.; have put in engine and planer and will add shingle mill.

The capacity of the Randolph Manufacturing Co., of Cuthbert, Ga., has been largely increased by much new machinery.

KENTUCKY.

Jones & Nash are building a mill at Shady Grove, Ky.

Z. T. Bondurant, of Burlington, Ky., has sold his mill to a gentleman who will fit up and make a large flouring mill of same.

J. A. E. Marony, of Pontiac, Mich., is in Owensboro, Ky., prospecting for a location for a shoe factory, and will probably locate there.

E. P. Haynes has sold his mineral lands in Livingston Co., Ky., to parties in Louisville.

Capitalists at Ripley, Ky., are talking of establishing an ice factory there.

MARYLAND.

A factory for the manufacture of swings has been established in Oxford, Md., by Mr. J. H. Nicholson, of Philadelphia.

A stock company is being formed for the establishment of extensive plow works at Hagerstown, Md. It is proposed to absorb a company now in operation at Mangansville, Washington county.

John W. Hall, J. A. Preston, J. R. Renous and G. W. Lehmann are working up a project to build a \$15,000 crematory at Baltimore, Md.

The Duffy Malt Whisky Co., of Baltimore, Md., will establish extensive bottling works at an early day.

Messrs. H. B. Wilmer and H. A. Clark, of Baltimore, and Mr. C. B. Story, of Williamsport, Pa., are in Easton, Md., making arrangements to introduce electric lights. They are negotiating for a building in Easton.

MISSISSIPPI.

It is reported in Natchez, Miss., that a foundry and agricultural implement works will be started.

H. C. Goodell, of Atchinson, Kansas, will build in Vicksburg, Miss., a cold storage warehouse for G. P. H. Rector & Co.

An engine and large amount of machinery are being put up in the Port Gibson Cotton Factory, Port Gibson, Miss.

The railroad that runs from Jackson to Natchez, Miss., will be extended to Columbus.

NORTH CAROLINA.

The owners of the Rudisill gold mine, Charlotte, N. C., have contracted with a Boston firm for the erection of a large electric light plant at the mines.

W. F. Kornegay, J. T. Miller and E. B. Borden are considering the project of erecting a hotel at Goldsboro, N. C.

W. F. Kornegay & Co. will locate their large foundry and machine shops, lately burned, on W. Centre street, Goldsboro, N. C. Buildings are being erected.

Charles Dewey has reopened his machine shops in Goldsboro, N. C.

Mr. Walker has bought the Central Falls Cotton Mills in Randolph Co., N. C.

The paper mill at Salem, N. C., which was destroyed by fire several years ago, will be re-established and run by steam-power.

Union county, N. C., will issue bonds to build a Court House, to cost \$30,000.

The building of a large brick tobacco warehouse is now being agitated by the citizens of Hickory, N. C.

John Calvin's saw mill in Samson Co., N. C., badly damaged by storm.

SOUTH CAROLINA.

The Greenville Cotton Seed Oil Mill, Greenville, S. C., has put in a new set of presses.

Wm. R. Lipscomb, of Spartanburg, S. C., has bought limestone land and will erect a kiln.

Geo. S. Turner, S. J. Simpson, Ellis McMillan, Laurence Potter and others, are working up a project of establishing a tobacco factory in Spartanburg, S. C.

Mr. Warren representing an English syndicate, has been investigating the mineral lands in Spartanburg Co., S. C.

A charter for the Domestic Fertilizer Co., of Columbia, S. C., has been secured, and a factory has been started with a capacity of from 70 to 100 tons a day.

TENNESSEE.

The Union City Manufacturing Co., Union City, Tenn., will move their manufactory to Memphis, Tenn.

M. H. Clift, of Chattanooga, Tenn., has completed negotiations for coal lands in Arkansas. J. T. Williams, Mr. Lloyd and M. H. Clift have bought an interest in the Quito Coal Company in that State, and are developing same.

Asa Faulkner has built a saw mill near McMinnville, Tenn., with capacity of ten thousand feet a day.

M. A. Sheppard, of Lebanon, Ill., is in Chattanooga prospecting for mineral lands. J. N. Stacy, of Wood county, Ohio, is in the same city looking after coal lands and will make some extensive investments.

There is a probability of another chair factory being built in Chattanooga, Tenn.

Hamilton county, Tenn., will petition the legislature to be allowed to issue bonds to build a \$200,000 bridge.

Cleveland, Tenn., is to have a street railroad.

Mr. Clark, of Wartrace, Tenn., will manufacture saddles and harness.

Col. McNulty and others, of Knoxville, Tenn., have organized a new gas company.

A steam saw mill is being built on Point Lookout near Chattanooga, Tenn.

The Anchor Woolen Mills, Chattanooga, Tenn., have stopped to put in new machinery.

TEXAS.

Howard & Co., of Dallas, Texas, will build a large grain elevator.

Morrison & Eddlesterin, are building a planing mill at Atlanta, Texas.

Lampasas, Texas, has decided to issue bonds to build water works. Work to commence at once.

A new carriage factory will be started in El Paso, Texas.

The contractors for the capitol at Austin, Texas, have advertised for bids for part of the work.

VIRGINIA.

A steam laundry will be started at Staunton, Va.

W. E. Gilliam is erecting at Wilton, Va., a sixty-horse power steam mill for manufacturing flour barrel staves and for grinding sumac and tan bark.

Staunton, Va., is figuring on gas works. The committee on water works, Messrs. Tams, Gooch and Wayt can give particulars.

M. R. Rodger's, Fincastle, Va., has added to his mill the latest improvement in machinery.

Messrs. Joliffe & Estill have secured the contract for 140 tons of iron pipe for the water works at Lexington, Va.

J. W. Foster will start a creamery on his farm near Leesburg, Va.

The P. & W. R. R. contemplate building a large and handsome depot at Petersburg, Va.

The Virginia Tin Mining & Manufacturing Co., of Rockbridge county, Va., has commenced operations and will have a large furnace in operation before July 1st. Two thousand acres are owned by the company.

WEST VIRGINIA.

C. M. Hoffman, of Charleston, W. Va., will erect at once a saw and flour mill.

BURNED.

The machinery in L. A. Carr & Co's. mill, Windfield, W. Va.; damaged \$1,000.

S. W. Harvin's gin house at Marion, S. C., damaged by storm. Loss \$1,000 on machinery.

The tobacco factory of W. M. Richardson at Green Bay, Va.

The saw mill, sash and blind and furniture factory of B. F. Willard & Son at Maryville, Tenn. Loss \$4,000.

The foundry and machine shops of James T. Caldwell at Aylett, Va. Loss \$8,000.

G. A. W. Thompson's gin house near Columbus, Ga.

The Fishburn Phosphate Works, near Jacksonboro, S. C., wrecked by boiler explosion.

The flour mills of Nat Palmer at Stony Point, Va., destroyed by fire. Loss \$10,000.

The L. & N. freight and passenger depot at Nashville, Tenn. Loss on depot, \$150,000.

Z. I. Lyon & Co's tobacco factory at Durham, N. C.

The mills of C. C. Shelton, Chattanooga, Tenn., damaged by fire. Lost \$3,000.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

The carriage manufactory of Presley Mene-frey at Dry Ridge, Ky. Lost \$2,000.

J. B. Kennedy's mill and gin at Goldsboro, N. C.

D. T. Williamson's carriage factory at Bryan, Texas.

Gin of Wallace Thompson, near Columbus, Ga.

Cigar factory of L. B. Martinez, New Orleans, La. Loss \$5,000

Fred Ritter's tannery at Louisville, Ky. Loss \$25,000, of which \$15,000 was on machinery.

Contrarities.

Editor Baltimore Manufacturers' Record:

I am now reading that excellent book written by Dr. Matthews entitled "Words; Their Use and Abuse." In the chapter on "Words without meaning" are the following truths: "What an amount of insincerity there is in human speech! In how few persons is the tongue an index to the heart! What a meaningless conventionality pervades all the forms of social intercourse! Everybody knows that 'How d' ye do?' and 'Good morning' are parroted in most cases without a thought of their meaning, or at least, without any positive interest in the health or prosperity of the person addressed; we begin a letter to one whom we secretly detest with 'my dear sir,' and at the end subscribe ourselves his 'obedient servant,' though we should resent a single word from him which implied a belief in our sincerity, or bore the slightest appearance of a command."

I have often thought of this same matter, and more especially in connection with strictly business letters. It is an old custom which dictates the use of social phrases in business letters; an old custom which should be at once abolished.

Sociability, like friendship, is one thing and business is another. There is already a superfluity of words, and everything which is useless and void of meaning should be cast aside as worthless. Let us begin our business letters with business sense; let the matter be brief and to the point. If Samuel Ferguson is ordering an engine from Robb, Roy & Co., let him begin his letter thus:

WASHINGTON, Jan. 5, 1885.

ROBB, ROY & CO., Pittsburgh:—

Send by the A. B. & C. R. R., one six horse-power engine. (Giving whatever items he wishes as to style, &c.)

SAMUEL FERGUSON.

Surely Robb, Roy & Co. will not be offended because they were not addressed as "Dear Sirs," or as "Gentlemen," and because Mr. F. did not put the stereotyped phrases "Yours truly," or "Your most obedient servant," before he signed his name. No wise man sends a telegram with these unmeaning phrases contained therein, and I trust the day is not far distant when no wise man will put them in his letters.

"Brevity is the soul of wit," has a deeper significance when used in the composition of business letters than in any other form of epistolary correspondence; so let the business world begin to write strictly business letters. And I hope that you may be the recipient of hundreds of letters such as the following:

"PLACE AND DATE.

RIGSBY & EDMONDS:

Send us the RECORD until further notice.

GEE, JAY & CO."

Should you, promise me you won't get mad. It may go a little hard with red-tape sticklers, (not that you are such), but the style of letter I here present, being simply business, will yet hold sway and the extraneous "Dear Sirs" and "Yours most truly," will be relegated to the mouldy past. J. G. F.

1,500 CONUNDRUMS.—We have just received from the publishers, a handsome little book with the above title, which contains over fifteen hundred conundrums, suitable for home and fireside amusement.

Protect Against Fire.

The adequate protection against fire, of villages, towns, hotels, and isolated property, is every day attracting more wide-spread attention. The complete devastation, the blotting out of whole towns and villages by fire, in many cases, for want of the simplest appliances, is an every-day occurrence. Even in large cities, fires are much more disastrous, and of greater extent than would be the case if more adequate means were present for smothering the fire in its incipency. Science and art have done great things in the production of the modern fire engine. We have machines to-day, that for light weight, power and efficiency, have never been equaled. But the case demands even greater promptness, greater power for a limited time, and withal, a machine much lighter, so that it may reach the point of danger quickly.

This has all been attained by the Chemical Engine, i. e., cylinders charged with chemical mixtures which generate a pressure by chemical action, the resultant fluid at the same time being much more efficacious in subduing fire than water. Of the several forms of chemical engines that have served the public, none have as yet attained the efficiency of "The Ruthenburg." Its features of excellence are its large carrying capacity, its simplicity of operation, and its light weight.

This style of machine is useful for extinguishing fires in their incipency only; therefore the one which is the lightest, the most readily handled, and has the largest charge of chemicals, is the best.

This machine, unlike others, remains under pressure continuously, the pressure being indicated by a gauge. The gauge is proof at all times of the condition of the apparatus; there are no mysterious turnings of a handle here and a lever there to generate the pressure at the time of using the machine. Any intelligent boy is competent to operate it. Any woman who can turn on a hydrant and sprinkle a lawn, can open the valve on the engine and use the hose.

In charging the engine, the chemicals are mixed with water in a cask, and forced in with a pump. This has been found a great advantage over any other means of introducing the required chemicals.

The solution used will not freeze, will not corrode metals, and will not injure the finest fabrics. Goods immersed in it and thoroughly dried, will not burn. They will slowly char but will not carry a flame. Two hundred feet of very best one inch gum hose and a patent shut-off nozzle accompany each engine. They are built in different sizes, and may be made to conform to any special requirements.

No. 1. For city use; to be drawn by two horses. Capacity 250 gallons. Weight, charged ready for service, 3,600 pounds.

No. 2. For city or village use; to be drawn by one horse. Capacity 175 gallons. Weight, charged ready for service, 2,400 pounds.

No. 3. For village, hotel, factory, stove or lumber yard use, fitted with drag ropes; requires four men to handle it. Weight complete, ready for service, 2,000 pounds, with capacity of 200 gallons.

No. 4. Same as No. 3, with weight of 1,200 pounds, and capacity of 100 gallons. Address the Ruthenburg Automatic Fire Extinguishing and Engineering Co., 64 West Third street, Cincinnati, Ohio.

Important to Southerners.

Persons arriving in New York via Cortlandt Street Ferry, by taking the 6th Avenue Elevated Train, corner Church and Cortlandt streets, can reach the Grand Union Hotel in 42d street, opposite Grand Central Depot, in twenty minutes, and save \$3 carriage hire. If en route to Saratoga or other summer resorts via Grand Central Depot, all baggage will be transferred from hotel to this depot free. 600 elegantly furnished rooms \$1 and upwards per day. Restaurant the best and cheapest in the city. Families can live better for less money at this hotel than at any other first-class hotel in the city. †

MESSRS. GEO. DRAPER & SONS, manufacturers of cotton machinery, Hopedale, Mass., will show in operation at the World's Exposition, New Orleans, the following machinery: A new Roving Frame, which will make from 1 to 4 hank roving on 9 1-2 x 5 1-4 bobbins at a speed of 1,200 revolutions of flyer per minute. A Ring Spinning Frame, with Evener and Rabbeth Spindles. A Hopedale Spooler, with Sawyer principle applied to spindle bolster, new thread guide, and automatic knot tier. Their 1884 Twister, from entirely new patterns, only thirty inches wide, with geared end boxed, and a new system of banding. And the Walcott Chain Warper, recently introduced. In addition to these machines they will show samples of all manufactures and attachments.

The exhibit will be located in Main building, between columns F and G, Number 29. It will be under the charge of Mr. William Welch, who is well known to manufacturers throughout the country as a spinner of large experience.

JOHN T. COLEMAN & SONS, corner Holliday and Pleasant streets, practical boiler makers, report business as very good. They are building one 125 horse-power horizontal steel boiler for one party; two 80 horse-power for another; two 80 horse-power for two others,—all for city. Also a large lot of tanks, mash tubs, hop jacks, meal and water tanks for customers. They have several orders for steel fire-box upright boilers, of which they make a specialty.

THE Westinghouse Machine Company, Pittsburgh, Pa., have issued an illustrated pamphlet of 40 pages showing the Westinghouse Engine as applied to saw mills, planing mills and shingle mills. The information given is of much value to mill operators and those contemplating engaging in this business.

MR. GEORGE C. KELLEY, dealer in hardware machinery, etc., Birmingham, Ala., writes: Business improving rapidly since the New Year came in. Prices on pig, bar, and sheet irons stiffening, with an increased demand.

A SPECIMEN of printing of more than usual excellence is a catalogue of the Lincoln Iron Works, of Rutland, Vt., manufacturers of stone and wood-working machinery. As this company has had large experience in building and equipping mills for working stone or marble, they say they feel confident of being able to give satisfaction and to furnish any plant required of the most approved and modern construction.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date Dec. 30, 1884. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C. Advice free.

Anderson, C. B., Maysville, Ky. Fire-escape. 310,014
Bower, W. C., Union Springs, Ala. Fish-hook. 310,118
Cherry, F. F., Stonewall, N. C. Seed-planter. 309,928
Cox, M. E., Crossville, La. Animal-powder. 309,821
Drake, E. L., Sherman, Tex. Gate. 309,827
Haltom, Samuel, Mt. Enterprise, Tex. Car-coupling. 309,944
Headley, A. D., Bladensburg, Md. Interfering boot for horses. 309,947
Hero, Julius C., Louisville, Ky. Boot. 310,055
Herzog, John, Baltimore, Md. Colored-fire compound. 309,948
Jaeger, Philip and J. W. Barnes, Baltimore, Md. Saw hanging device for stone-sawing machines. 309,956
Johnson, Josee, Norfolk, Va. Peanut-cleaner. 310,137
Jones, Thornton, Leesburg, Va. Crupper for harness. 310,139
Lee, Thos. L., Memphis, Tenn. Ventilated barrel. 310,141
McGovern, George, Richmond, Va. Hay or cotton press. 310,143
Miller, W. R., Baltimore, Md. Telephone. 310,068
Mitchell, John, Louisville, Ky. Steam-boiler. 310,071
Moore, G. W., New Orleans, La. Ring for saddle-girths. 310,144
Munger, R. S., Mexia, Texas. Mechanism for sharpening teeth of cotton-gin saws. 310,073

Orm, John, Paducah, Ky. Machine for swaging saw-teeth. 309,870
Ross, N. B., Nashville, Tenn. Appliance for traction-cables. 309,881
Sherry, Arthur, Learned Station, Miss. Brick. 310,088
Smith, L. Starr, Ft. Worth, Texas. Ink-blotter. 309,892
Thomas, A. D., Little Rock, Ark. Cotton-press. 309,995
Van Noss, J. H. and M. A. Bland, Charlotte, N. C. Electro-magnetic dental plugger. 310,099
Warfield, S. D., Baltimore, Md. Corn-silker. 309,999
Warfield, S. D., Baltimore, Md. Intermittent feed mechanism for green-corn cutters. 309,000
Warren, W. H., Augusta, Ga. Cultivator. 309,900
Winzenried, Godfrey, Schulenburg, Texas. Cotton-harvester. 310,108

WEEK ENDING JANUARY 6, 1885.

Anderson, W. T., Rock Hill, S. C. Baling-press. 310,357
Badinger, G. W., near Joshua, Tex. Plow. 310,243
Bikle, Chas. A., Hagerstown, Md. Clover thrasher and huller. 310,246
Brown, G. S., Charleston, S. C. Refrigerator. 310,371
Butler, H. T., Spartanburg, S. C. Cotton-chopper. 310,493
Carrico, T. W., San Antonio, Tex. Mold and mold-hoisting apparatus for building concrete walls. 310,377
Carakadon, T. R., Keyser, W. Va. Silo. 310,378
Clay, Wm. H., Paris, Ky. Anchor-stake for check-row wires. 310,384
Edmiston, J. F., Edmistonville, N. C. Cotton-seed planter and cultivator. 310,191
Edwards, W. F., Covington, Ga. Cotton-gin rib. 310,193
Furnell, W. P., Silver Hill, W. Va. Ballot-box. 310,306
Grigsby, L. Z., Minden, La. Combined band-cutting and feeder for thrashing-machine. 310,417
Hess, W. C., Louisville, Ky. Automatic fire-alarm box. 310,424
Hilton, G. P., Glendale, S. C. Remedy for liver and kidney diseases. 310,427
Hogan, G. W., Bentonville, Ark. Fruit and nut gatherer. 310,429
Huber, L. C., Huber, Ky. Car brake. 310,435
Hurst, H. Priuli, Newport, Ky. Child's copy-book. 310,515
Jones, L. T., Baltimore, Md. Sewing-machine table. 310,438
Kann, Gustave S., Baltimore, Md. Shoe. 310,440
King, F. M. & W. E., Wilmington, N. C. Fertilizer distributor and planter. 310,308
Lamar, Jas. S., Augusta, Ga. Cotton-chopper. 310,446
Marshall, C. P., Memphis, Tenn. Air-refrigerating apparatus. 310,296
Melville, C. H. & T. W. Brown, Chattanooga, Tenn. Rotary engine. 310,531
Petit, N. F., Jr., Charleston, S. C. Type-writing machine. 310,306
Prounitzer, Julius, Nashville, Tenn. Trunk-tray. 310,222
Purcell, G. W., Black Hawk, Miss. Cotton-harvester. 310,314
Ralston, Joseph, Brenham, Texas. Cotton-cleaner. 310,315
Reynolds, Orrin A., Covington, Ky. Ruffling attachment for sewing-machine. 310,465
Smith, W. T., Bozeman, Ala. Lumber-stacker. 310,232
Speer, Carl & W., Baltimore, Md. Car-coupling. 310,327
Terrell, H. D., Covington, Ga. Convertible plow. 310,333
Wakeford, W. H., Baltimore, Md. Roller-grinding mill. 310,236
Warren, A. J., Nashville, Tenn. Wardrobe-bedstead. 310,343
Waterworth, A. M., Baltimore, Md. Bath-tub. 310,344
Williams, Jas., Laytonville, Md. Feathering paddle-wheel. 310,350

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, Jan. 14, 1885.

There are no new features to note in this market for the past week. Trade continues to rule quiet and disappointing, with values at about cost of production. We quote:

Ref. Bar Iron, 1 to 6 1/2 to 1	1.80	1.90
" " 1 1/2 to 2 1/2 to 1	1.80	1.90
" " 3/4 to 1, round and	1.80	1.90
Square	1.80	1.90
Hoop Iron, 1 1/2 wide and upward	2 1/2	2 1/2
Band Iron, from 1 1/2 to 6 in. wide	2 1/2	2 1/2
Horsehoe Iron	3 1/2	3 1/2
Norway Nail Rods	5	5 1/2
Black Diamond Cast Steel	10	11
Machinery Steel	4 1/2	4 1/2
Spring Steel	3 1/2	4
Common Horse Nails	10	11
Railroad Spikes, 5 1/2 to 16	9 1/2	9 1/2

Pig iron meets with but little demand in this market at present, and we quote as before, viz:

Baltimore Charcoal Wheel Iron (all Baltimore ore)	28 00	29 00
Virginia C. B. Charcoal Wheel Iron	28 00	—
Anthracite, No. 1	19 00	20 00
" " 2	18 00	19 00
" " 3	17 00	18 00
" " Mottled and White	16 00	17 00

BRASS TUBING.
Brown & Sharpe's Gauge the Standard for all Tubing.
Plain, to No. 20, inclusive, Per lb. 35
Above 5-16 inch to 3 inches, inclusive, 45
Plain, to No. 21, above 3 inches, 45
" 5-16 inch to No. 20, 60
" 3-16 inch, 1.00
" 1/4 inch, 1.50
Bronze Tubing 3 cents per pound more than Brass.
Nos. 21, 22, 23, two cents advance on list for each number.
Nos. 24, 25, 26, four cents advance on list for each number.
Above No. 26, special rates.
All Mandrel-drawn Tubes, 3/4 inch and above, five cents advance on list prices.
All Mandrel-drawn Tubes under 3/4 inch, twenty-five cents per pound advance on list prices.
Fancy Tubing to No. 20, 40-43
English, Scotch and Extra Pattern Fancy 48
Tubing to No. 20, 48
Tubing sawed or cut, 2 to 4 feet long, one cent advance on list.
Add to one cent one-half cent for each additional cutting under two feet.

WIRE IN COILS.
Old English gauge the Standard.

	Common High Brass.	Low Brass.	Gilding, Bronze and Copper.
All Nos. to No. 16, inclusive, \$ 22	\$ 26	\$ 30	
Nos. 17 and 18, 23	27	31	
" 19 and 20, 24	28	32	
" 21, 25	29	33	
" 22, 26	30	34	
" 23, 27	31	35	
" 24, 28	32	36	
" 25, 29	33	37	
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" 83, 87	91	95	
" 84, 88	92	96	
" 85, 89	93	97	
" 86, 90	94	98	
" 87, 91	95	99	
" 88, 92	96	100	

Spring Wire, 2 cts. lb. advance.
Whitened Wire, 3 cts. lb. advance.
Flat, Square and Half-round Wire 4 cts. advance on Round Wire.
Fancy Wire not less than 10 cts. advance on Round Wire.
Spooling on one-pound spools 12 cts. lb. extra.
Spooling on ten-pound spools or more, 2 cts. lb. extra.

PAINTS, OILS, &c.

PAINTS.

Black Lamp, coach painters, 1 lb 20c	
Black Lamp, ordinary, 1 lb 40c	
Black Ivory Drop, fair, 1 lb 15c	
Black Ivory Drop, best, 20c	
Black Paint, in oil, kegs, 6c; assorted cans, 9c	
Blue Prussian, fair to best, 35c 40c	
Blue Prussian, fair to best, in oil, 35c 40c	
Blue Chinese, dry, 70c	
Blue Ultramarine, 15c 25c	
Brown, Spanish, 15c	
Brown, Van Dyke, 15c	
Green, chrome, 15c	
Green, chrome, in oil, 15c 25c	
Green, Paris, 15c	
Green, Paris, in oil, good, 20c; best, 25c	
Iron Paint, bright red, 1 lb 25c	
Iron Paint, brown, 1 lb 15c	
Iron Paint, purple, 1 lb 30c	
Iron Paint, ground in oil, bright red, 1 lb 55c	
Iron Paint, ground in oil, red, 1 lb 50c	
Iron Paint, ground in oil, brown, 1 lb 45c	
Iron Paint, ground in oil, purple, 1 lb 60c	
Linseed Oil, raw, 53c	
Single Boiled, 55c	
Double, 61c	
Mineral Paints, 2c 4c	
Orange Mineral, 10c	
Red Lead, American, 6c 7c	
Red Venetian, (English) dry, 1 lb 75c	
Red Venetian, in oil, assorted cans, 9c; kegs, 6c	
Red Indian, dry, 10c 12c	
Rose Pink, 10c 12c	
Sienna, American, raw, 4c	
Sienna, burnt, 4c	
Sienna, burnt, in oil, 8c 15c	
Sienna, raw, 8c 15c	
Umber, burnt, 4c 8c	
Umber, burnt, in oil, 8c 15c	
Umber, raw, 3c 7c	
Umber, raw, in oil, 8c 15c	
Vermilion, Chinese, 90c	
Vermilion, English, 60c 65c	
Vermilion, American, common, 15c	
White Lead, American, pure dry, 6c 6 1/2c	
White Lead, American, pure in oil, 6c 6 1/2c	
White, Paris, English, prime, in bbls, 1 1/2c 9c	
Yellow Ochre, French, in oil, ass'd cans, 9c; kegs, 6c	
Yellow Ochre, American, in bbls, 1 1/2c 9c	
Yellow Chrome, 2c 18c	
Yellow Chrome, in oil, 9c 12c 18c	
Zinc White, American, No. 1, dry, 5c 6c	
Zinc White, American, No. 1, in oil, 7c 9c	
Zinc White, French (Paris) dry, 9c 12c	
Zinc White, French in oil, 10c 14c	

OILS.

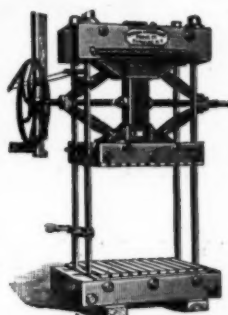
Bleached W. Sperm oil, 1 00c 1 03	
Nat., 95c 98	
B. W. Elephant oil, 75c	
Whale oil, 70c 72	
Prime Lard oil, 62c 65	
Extra No. 1 Lard oil, 60c	
Lubricating oils, 12c 25	
Miners' oil, 45c 55	
W. Pressed Fish oil, 40c 50	
Neatsfoot oil, 65c 80	
Steam-refined Cylinder oil, 40c 55	
Best Filtered, 65c 65	
Signal oil, 55c 65	
Paraffine, 12c 30	

SUNDRIES.

Benzine, 8c 10c	
Turpentine, 3 1/2c 3 3/4c	
Chalk, 1/2c	
Chalk, block, 1/2c	
Dryer patent Am'n., ass'd cans, 8c; keg, 7c	
Frostings, 40c	
Glue, white, 18c 36c	
Glue, sheet, 14c 20c	
Glue, ordinary, 9c 12c	
Glaziers' Points, zinc, 8c	
Gum, Copal, 36c	
Gum, Damar, 25c	

Baling Press

IRON OR WOOD FRAME



BY HAND OR POWER.

COTTON, WOOLEN or PAPER FACTORIES

Lard, Tallow, Oleo., Paraffine, Cotton Seed, Castor Oil, and many other kinds of Presses. Send for circulars.

BOOMER & BOSCHERT PRESS CO.
Syracuse, N. Y.

—219 Fulton St., New York City.—

SHEET IRON ROOFING.

Northrop's Patent Cap Seam Iron Roofing.

No rivets, screws or nails through the sheets. Easily applied and perfectly watertight.

CRIMPED IRONS

of various styles for Roofing and Siding.

IRON CEILING.

ORNAMENTAL. DURABLE. FIRE-PROOF.

A. NORTHROP & CO.
97 First Avenue,
PITTSBURGH, PA.

Derby Roll Top Desks.
—Best Office Desk in the World.—



Cherry, Walnut, Oak, Ash and Mahogany.

Send for Illustrated Catalogue.

DERBY & KILMER DESK CO.
55 Charlestown St., Boston, Mass.

THE BRADSTREET Mercantile Agency

HAS NOW BEEN
Under its present successful management for the past seven years.

And during that time its business has more than trebled, while its facilities have proportionately increased.

No expense is considered too great in obtaining and applying to the conduct of the business all possible improvements. With its present system for obtaining and promulgating information, this Agency is justly regarded by its patrons as authority on all matters affecting commercial credit. Its ramifications are greater and its business larger than any similar organization in the world conducted in one interest and under one management.

You are respectfully invited to investigate, and if in need of an Agency, to test its ability to serve you.

CHAS. F. CLARK, President.
Baltimore Office,—American Building,
H. KERSHAW, Supt.

1837. NOVELTY WORKS. 1893.

JAMES MURRAY & SON,
Machinists and Millwrights

Engines and Boilers, Mills of all kinds, Marine Railways, &c. Improved Clay Tempering Machinery, Steam or Horse Power. Phosphate Machinery, Crushers, Rollers, Mixers, &c., &c.

40, 42 & 44 York Street,

NEAR LIGHT, BALTIMORE.

Repairing of all kinds promptly done.



—THE—
Sigourney Drill.

Sensitive and Strong.
Capacity Unequaled.

Has index lines on column, stop on pinion shaft and spindle so arranged that the drill will not catch. Fitted with chuck for spindle, belt and dead centers and V's for drilling transversely through cylindrical forms; also with a 4-inch chuck for centering shafts without first finding center by other methods.

Send for circular.

Every machine warranted.

The Sigourney Tool Co.,

Hartford, Conn.

SCALE IN BOILERS!

The DANGER and REMEDY!

Steam Users should realize the Danger and Extravagant Waste of Fuel resulting from Scale in Steam Boilers. We offer you a perfect Remedy in our Boiler Powder, which is absolutely harmless to Boilers or Connections. For particulars address,

OHIO SCALE SOLVENT CO.,

C. W. WITHEBURY, Secretary,
Room 27 Glenn Building.

Cincinnati, Ohio.

GUILD & GARRISON,
Steam Pumps,
Vacuum Pumps, Air Compressors,

BROOKLYN, NEW YORK.

SEND FOR ILLUSTRATED CATALOGUE.

REMINGTON STANDARD TYPE-WRITER

THE STANDARD WRITING MACHINE OF THE WORLD.

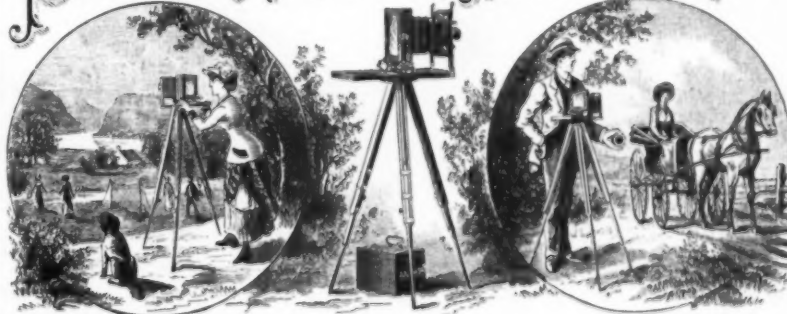


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BY COL. M. B. HILLYARD, NEW ORLEANS, LA.

Published by THE MANUFACTURERS' RECORD, Baltimore, Md.

➤PROSPECTUS.◀

The publishers of the MANUFACTURERS' RECORD, in furtherance of their aim to lead in matters promotive of the material interests of the South, beg to state that they will shortly issue a work entitled **THE NEW SOUTH**, from the pen of COL. M. B. HILLYARD, of New Orleans, La. The book is devoted to an exposition of the South. It will treat of topography, soil, climate, woods, water-courses, resources, manufactures and such laws as are needful to be known. It will portray the attractions to the capitalist, and those seeking homes in the South, in the lines of manufacture, horticulture and agriculture. It will show what the South is and what she is likely to become by reason of her almost untouched, and slightly known resources in soil, climate, rainfall, marls, minerals and geographical position, and the vast variety of products possible to a wise and varied husbandry, and a grasp of her rich opportunities for manufacture.

The information is new, broad, accurate, unbiased and abundantly avouched by unquestionable authority.

The book is entirely new in its scope and design, and aims to be a guide to all seeking information on most vital matters. No such book has ever been written; and it meets a want now imperative to those seeking information as to the South.

No one wishing to be informed about the South, either in this country or Europe, can dispense with this book.

The author is well-known both North and South for his long identification with Southern development, and perhaps no one else has contributed more to the general stock of information bearing on the South in the columns of Northern journals. His study of the South has been long, large and unremitting, and he contributes the ripe results of these years of study and personal inspection to the preparation of this book. His many qualifications pointed him out to the publishers as the one most fitted for a duty of such delicacy, magnitude and responsibility. They have, however, preferred not to rely upon their own convictions alone as to the author's fitness for the work. Below is furnished abundant testimony from eminent persons North and South, whose reputation, in some instances, is not limited to this continent, and who have witnessed the work of the author for years, in his attempts to invite attention to the South. These are replies to letters sent out by the publishers enquiring as to COL. HILLYARD's fitness for this work.

The book will contain about 400 pages, and will be sold at a price but little in advance of the cost. It will be handsomely gotten up, and will be a model of typography. Its price will be, in paper covers 75 cents; in cloth, \$1.25. At these prices the sale of the book will not, of course, prove largely remunerative; nor was it with that object that it was undertaken. To the author the writing of it has been a "labor of love," and a furtherance of aspirations for Southern development. To the publishers it affords an opportunity to emphasize, and they hope, signalize, their enterprise, and to contribute a noteworthy indication of their resolve to press the claims of the South upon the capital and enterprise of the world.

The work is confidently commended for the novelty and amplitude of its design, for the breadth and accuracy of its information, for the laboriousness of its research, the many years of study and investigation there formulated, and its conscientious and impartial animus.

The following are letters corroborative of the wisdom of committing this work to COL. HILLYARD:—

From MAJOR S. A. JONAS, Aberdeen, Miss., *United States and State Commissioner from Mississippi to the World's Industrial and Cotton Centennial Exposition*:—"In answer to your favor of recent date I take pleasure in saying that I have known COL. M. B. HILLYARD for a number of years, and regard his selection as the editor and compiler of your book upon the South and its resources, as the wisest and best that could have been made. I do not in saying this pretend to gauge his literary capacity, but I know the man's wealth of information upon the subject you propose to confide to him, and where so much has been stored away in good and acceptable shape, it can hardly come forth any the worse for contact with its treasure house, especially in this instance, where the keeper is a man of character and culture, and withal an amiable and enterprising gentleman."

From PARKER EARLE, Esq., *President of the Mississippi Valley Horticultural Society, and Chief of the Horticultural Bureau of the World's Industrial and Cotton*

Centennial Exposition:—"Your engagement of COL. M. B. HILLYARD, of New Orleans, to write your proposed book, descriptive of the South and its varied resources, is a very fortunate one. I think there is no man in the country possessing so many qualifications for doing it accurately, ably and in a pleasing manner. I wish your enterprise great success."

From DANIEL DENNETT, Esq., *Agricultural Editor of the New Orleans Picayune*:—"I have just received your note. I have been acquainted with COL. HILLYARD for more than eight years. I know no man who has studied the interests of these States more intently than he, or with more ardent desire to benefit the South. He has acquired a vast amount of valuable information about the agricultural resources and mineral wealth of these States, and has the ability to put his information in readable shape. I consider him scrupulously honest, and his character above reproach. No man has shown more zeal or industry than he in efforts to promote the best interests of the Southern people. He is popular, and makes friends wherever he goes; and his friends are the best informed people in this country. He has a happy faculty for collecting such facts as you need for the book you intend to publish."

From JAMES H. HEVERIN, Esq., *The Eminent Philadelphia Lawyer*:—"I have known COL. M. B. HILLYARD all his lifetime; and I know no one, who from native talents, natural tastes, thorough education, long residence in the South, general experience, close observation, impartial judgment, and conscientious promptings, is more competent for the work you have confided to him. COL. HILLYARD has resided in a number of the Southern States, and during that time I have known, seen and heard much of him. He has been a close student, a careful observer and at all times an interested and enterprising citizen. He is thoroughly familiar with the States of the South, their governments, their people, customs, habits, products, industries, resources and histories, and is therefore fully and admirably equipped in every way for the charge with which you have entrusted him. It gives me great pleasure to commend him to those who may be interested in your contemplated publication."

From THOMAS MEEHAN, Esq., *The Celebrated Author, now Editor of The Gardeners' Monthly, Philadelphia*:—"I am very glad to know that you contemplate issuing a work on the industrial resources of the South."

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You have made an admirable selection in COL. M. B. HILLYARD to write such a work. He is thoroughly acquainted with every section of the South, and will collect information invaluable to those desiring knowledge of any Southern State."

From J. G. KINGSBURY, Esq., *Editor of The Indiana Farmer, Indianapolis*:—"COL. M. B. HILLYARD has contributed to our columns, and he is a clear and interesting writer, careful and painstaking in collecting and reporting information regarding the condition and resources of the Southern States. He is eminently qualified for the work in which he is now engaged."

From GENERAL A. M. WEST, *Formerly President Mississippi Central R. R. Co., 2d Vice-President New Orleans, St. Louis and Chicago R. R. Co., President Mississippi Valley R. R. Co., etc.*:—"Your letter received, and contents noted. * * * I congratulate you on the selection of MR. HILLYARD. No one more competent than himself could have been chosen."

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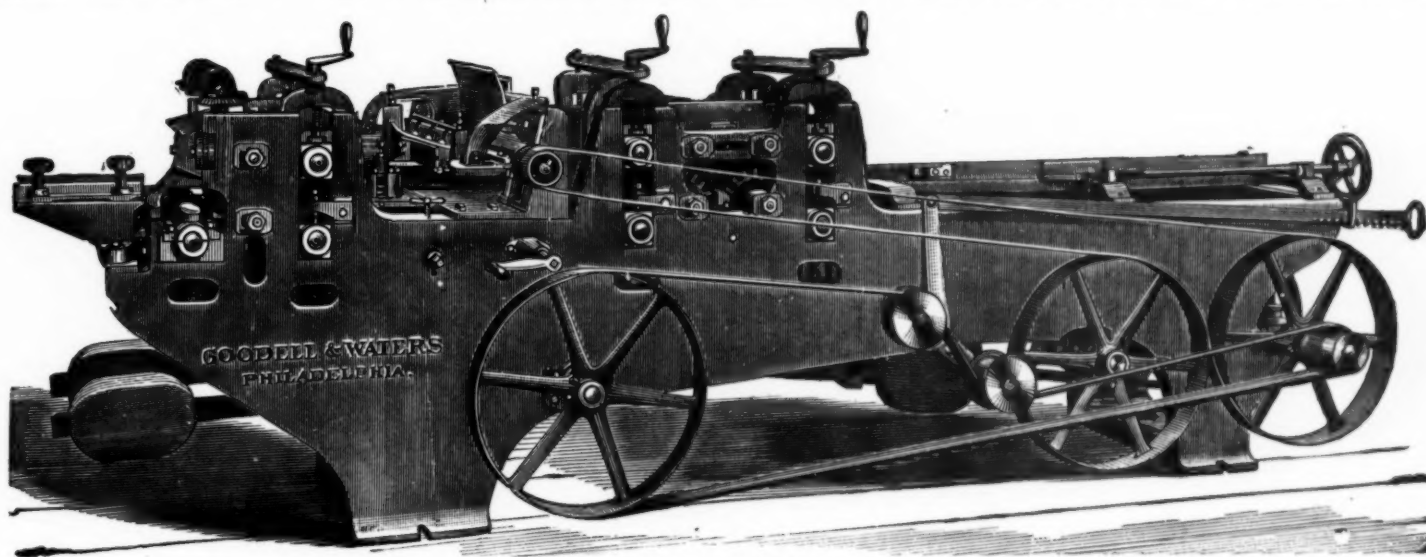
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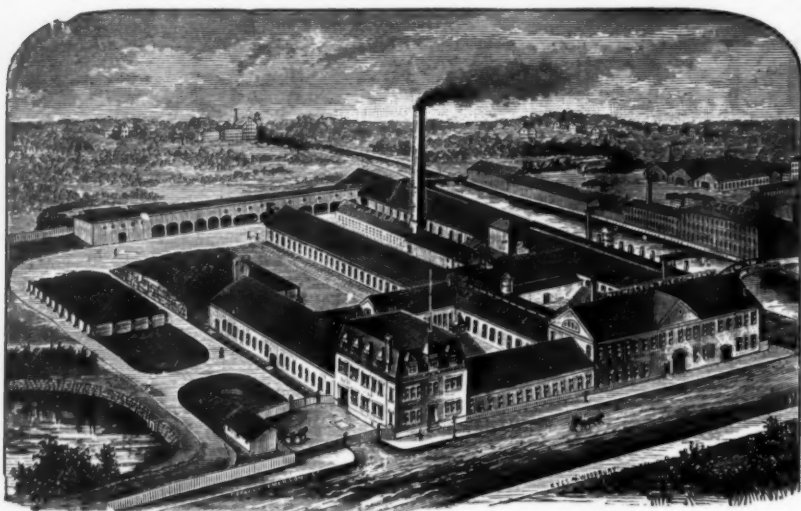
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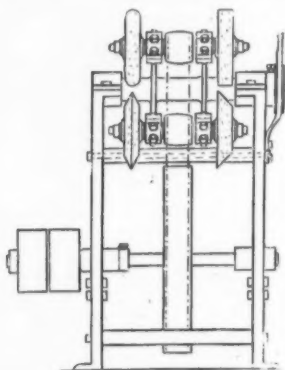
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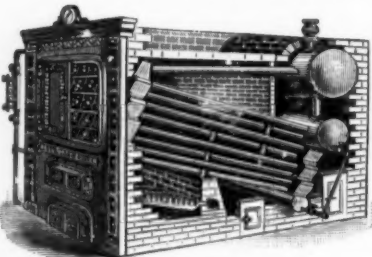


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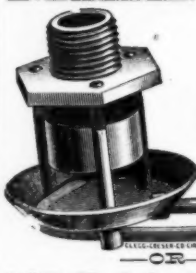
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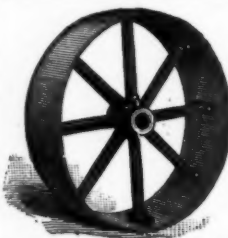
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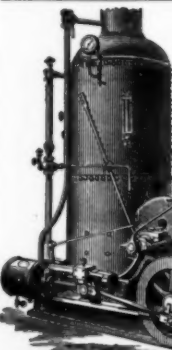
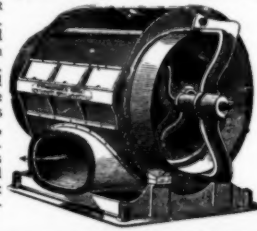
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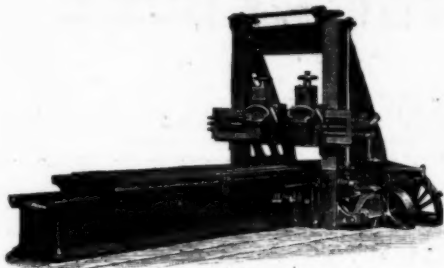
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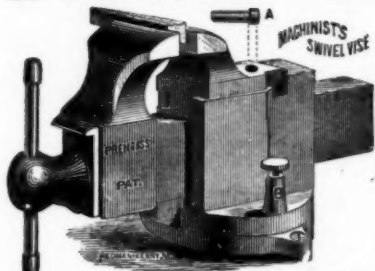
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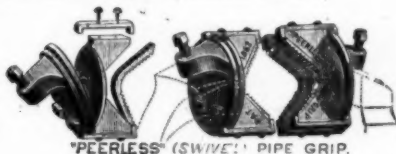
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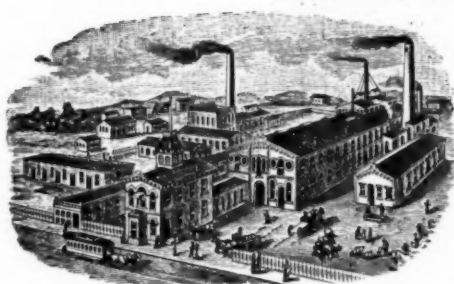
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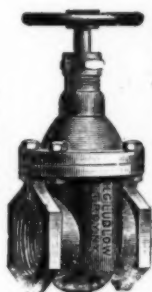
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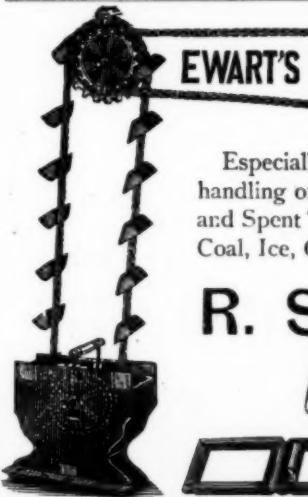
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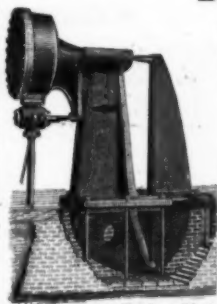
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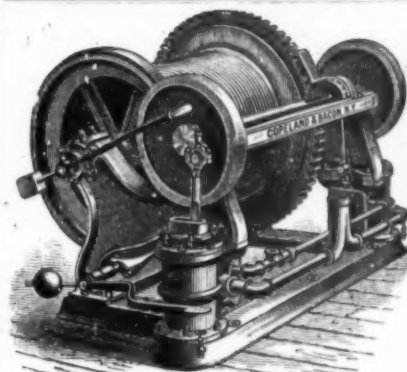
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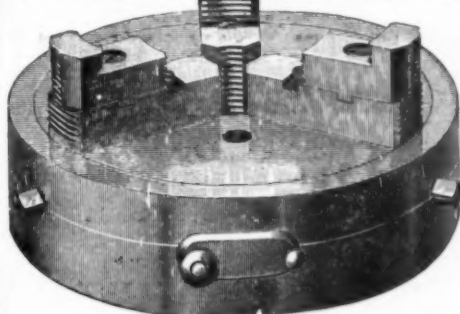
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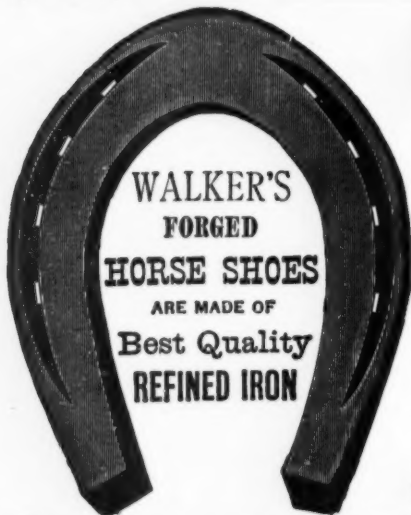
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Roy & Co.—Strap and T Hinges and Wrought Butts.
Saranac Horse Nail Co.
Scott Mfg. Co.—Peach and Apple Pearlers, etc.
George M. Scott.—Blacksmith Bellows.
Wilson's Mfg. Co.—Coffee Mills, Vises and Ship Hardware.
Walker's Horse and Mule Shoes.
International and Pimlico Brand of Horse Nails, Foreign and Domestic Hardware, Cutlery, Chains, Pistols, etc.

**Walker Horse Shoe Co., Baltimore, Md.**

OF SUPERIOR SHAPE and FINISH.

Clean Crease of Proper Width and Depth.

Nail Holes Punched Through at Proper Angles.

Free from Burs. Outside Edges Smooth and Free from Bulges. Popular with all Shoers, as they are easily fitted. **EVERY SHOE WARRANTED.** ALSO,

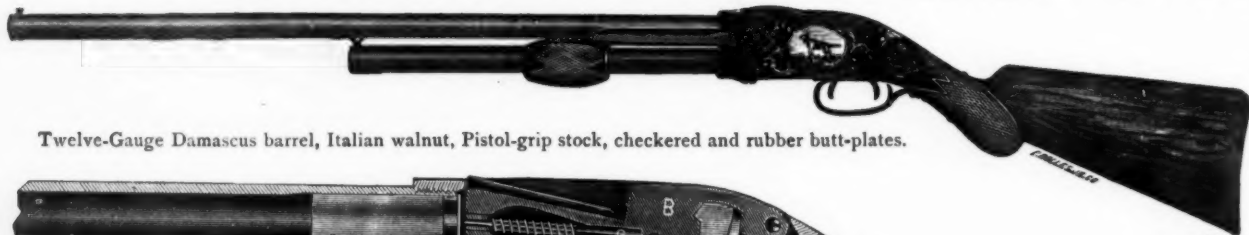
MULE SHOES,

Of Superior Pattern, Quality and Shape.

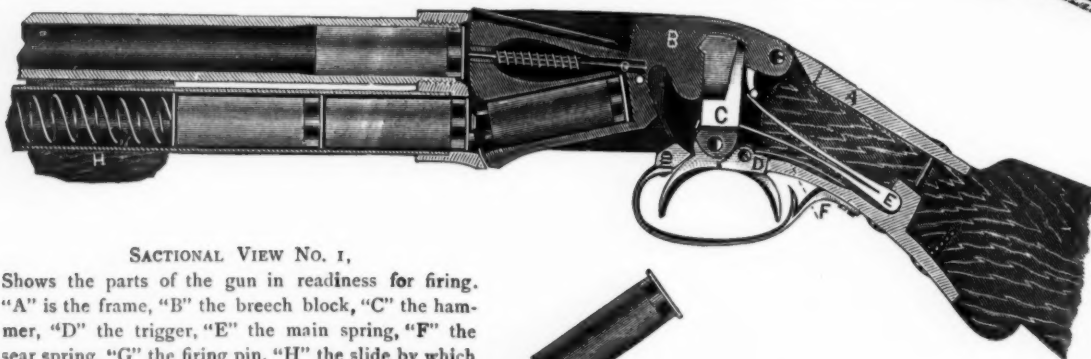
Sole Patentees and Manufacturers.

SPENCER Repeating SHOT-GUN.

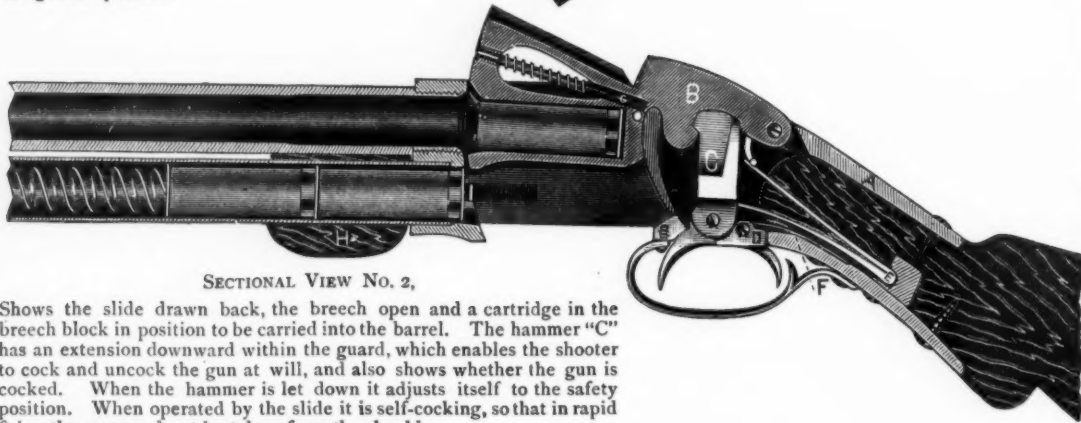
WILL FIRE SIX TIMES IN THREE SECONDS.



Twelve-Gauge Damascus barrel, Italian walnut, Pistol-grip stock, checkered and rubber butt-plates.



SECTIONAL VIEW NO. 1,
Shows the parts of the gun in readiness for firing. "A" is the frame, "B" the breech block, "C" the hammer, "D" the trigger, "E" the main spring, "F" the sear spring, "G" the firing pin, "H" the slide by which the gun is operated.



SECTIONAL VIEW NO. 2,
Shows the slide drawn back, the breech open and a cartridge in the breech block in position to be carried into the barrel. The hammer "C" has an extension downward within the guard, which enables the shooter to cock and uncock the gun at will, and also shows whether the gun is cocked. When the hammer is let down it adjusts itself to the safety position. When operated by the slide it is self-cocking, so that in rapid firing the gun need not be taken from the shoulder.

MANUFACTURED BY
THE SPENCER ARMS CO.,
WINDSOR, CONN.

SEND FOR ILLUSTRATED CATALOGUE.

Within five months.

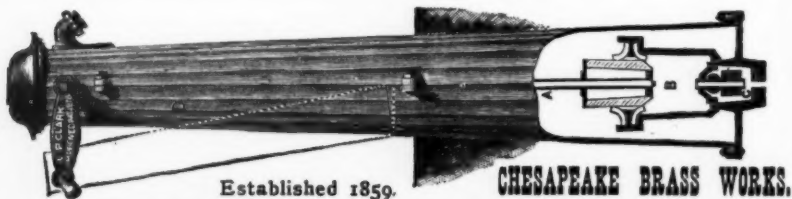
Championship Badge four times

Has won the Connecticut Individual

struction, Convenience of Loading, Etc.

racy and Rapidity of Firing, Simplicity of Con-

Unequaled for Safety, Workmanship, Force, Accu-



L. P. CLARK & SONS, 34 N. Holliday St., BALTIMORE.

S. W. RITTER, Millwright,

—BUILDER OF—

Flour and Saw Mills, Drug and Chemical Works, Portable Mills, Smut Machines, Mill Stones. Bolting Cloths, Brushes, Guano Fertilizer Mills, and General Mill Supplies,

261 S. Caroline Street, BALTIMORE, MD.

→ HARDWARE. ←

Baltimore WHOLESALE Prices.

ANVILS.
Eagle and Vulcan..... 10 c. dis 20%
Wright's..... 10 c. dis 20%
Armstrong's Mouse Hole..... 9 1/2 c
Trenton..... 10 c. dis 20%
Wilkinson's..... 10 c. dis 20%

AUGERS AND BITS.
Conn. Valley Mfg. Co..... 60%
Douglas Mfg. Co..... 10%
Ives..... 10%
Cook's Douglas Mfg. Co..... 10%
Griswold..... 10%
Patent Solid Head..... 25%
Russell Jennings' Auger, Dowell, Machine-
Dowell and Hand Rail Bits..... 10%
Ives' "Jennings" Bits..... 10%
Expansive Bits, Clark's small, 1/8; large, 26..... 25%
Expansive Bits, Ives..... 33 1/2%
Expansive Bits, Blake's..... 40%
Hollow Augers, Ives..... 25%
Hollow Augers, Douglas..... 25%
Hol. Aug., Bonney's Adjust., 1/2 doz 4/8, dis 25%
Hol. Aug., Stearns' Adjust., 1/2 doz 4/8, dis 25%
Hol. Aug., Ives' Expansive, each 4/8, dis 30%
Hol. Aug., Universal Expansive, each 4/8, dis 20%
Wood's..... 25%
Gimlet Bits, 1/2 doz 3/4, dis 25%
Gimlet Bits, Diamond..... 40%
Double Cut Gimlet Bits, Shephardson's..... 33 1/2%
Double Cut Gimlet Bits, Douglas..... 33 1/2%
Double Cut Gimlet Bits, Ives..... 50%
Lor's Bit Stock Drill..... 25%
Lor's Homedieu's Ship Augers..... 15%

AWL HAFES.
Sewing Brass Ferrule..... 35%
Patent Sewing, Short..... 10%
Patent Sewing, Long..... 10%
Patent Peg, Plain Top..... 10%
Patent Peg, Leather Top..... 10%
AWLS, BRAD SETS, AC.

Awls, Sewing, Common..... 75%
Awls, Shouldered Peg..... 75%
Awls, Patent Peg..... 75%
Awls, Shouldered Brad, 1/2 doz 3/4, dis 25%
Awls, Handled Brad..... 75%
Brad Sets, Aiken's..... 40%
Brad Sets, No. 42, 1/2 doz 3/4, dis 25%
Brad Sets, Stanley's Exc., No. 1, 1/2 doz 3/4, dis 25%
Brad Sets, Stanley's Exc., No. 2, 1/2 doz 3/4, dis 25%
Brad Sets, Stanley's Exc., No. 3, 1/2 doz 3/4, dis 25%

AXES.
Collins & Co..... 75%
Cohoes Mfg. Co..... 75%
Lippincott or Mann's..... 75%
Single Bit, 4 1/2 to 5 1/2 and under..... 75%
Single Bit, 4 1/2 to 6 and over..... 75%
Double Bit, 4 1/2 to 5 1/2 and under..... 75%
Double Bit, 4 1/2 to 6 and over..... 75%
Double Bit, beveled..... 75%
Second quality Axes..... 50 cts. less than above

AXLES.
Sheldon & Co., iron..... 55%
" " steel..... 55%
AXLE GREASE—Frazier's..... 6c.

BALANCES.
Spring Balances..... 25%
BELLS.

Hand, Light Brass..... 70%
Hand, White Metal..... 60%
Hand, Silver Chime..... 20%
Hand, Globe (Cone's Patent)..... 25%
Gong, Abbe's..... 20%
Gong, Yankee..... 20%
Gong, Barton's..... 20%
Gong, Reading..... 20%
Gong, Pull, Brook's..... 20%
Gong, Taylor's..... 20%
Lever, Sargent's..... 20%
Bloomfield..... 20%
Call..... 20%
Cow, Common Wrought..... 55%
Cow, Western, Sargent's List..... 55%
Cow, Kentucky, Sargent's List..... 55%
Cow, Moore's or Dodge's, Genuine Ky., new list:
Nos. 0 1 1/2 2 3 5 6 Hog 1 dis 60%
12 10 8 6 4 3 2 1 0 10%
Cow, Texas "Star"..... 40%

BELLOWS.
Blacksmith's Common..... 50%
Molder's..... 25%
Hand Bellows..... 25%

BLIND FASTENERS.
Francis..... 20%
Mackrell's..... 20%
Van Sand's Screw Pattern..... 20%
Van Sand's Old Pattern, 1 1/2, 1 3/4, 1 1/2, 8 1/2 gro. net
Merriman's, new list..... 20%
Merriman's, 10 1/2 in..... 20%
Zimmerman's, 9 in..... 20%
Zimmerman's, without screws..... 20%

BLIND STAPLES.
Barbed, 1/2 in. and larger..... 11 c
Barbed, 3/4 in..... 13 c

BLOCKS.
Penfield Block Co., Rope and Iron Strap'd..... 40%

BOLTS.
Cast Iron Barrel Shutter, &c..... 55%
Cast Iron Chain (Sargent's list)..... 60%
Wrought Barrel..... 55%
Wrought Square..... 55%
Wrt. Shutter, all Iron, Stanley's list..... 55%
Wrt. Shutter, Brass K. B., Stanley's list..... 55%
Wrought Shutter, Sargent's list..... 55%
Wrought Sunk Flush, Sargent's..... 55%
Wrought Sunk Flush, Stanley's..... 55%
Wrought B. K. Flush, Stanley's..... 55%
Carriage and Tire, Common, new list..... 75%
Carriage and Tire, Philadelphia Pattern..... 75%
Carriage Bolts, Clarke's..... 80%
Carriage Bolts, Lancaster Bolt Co.
Excelsior, Low List..... 60%
Norway..... 75%
R. B. & W. Carriage (old list)..... 75%
Iron, American Screw Co's., Phila..... 80%
Tire, "Bay State"..... 70%
Eagle Philadelphia Tire Bolt..... 82 1/2%
Stove..... 60%
Flow..... 50%
Machine..... 70%
Bolt Ends and Lag Screws..... 70%

BRACKETS.
Q. S. Backus..... 50%
Barber's..... 40%
Spofford's Patent..... 50%
Ive's Patent Braces..... 50%
Common Ball (American)..... 55%
Amidon's..... 50%

BORING MACHINES—WITHOUT AUGERS.
Sweet & Clark upright, 3.60 angular..... 4.40 net
Lawrence..... 3.00
Hubbard..... 3.00
Phillips, with Augers..... 7.00

BRACKETS.
Shelf, plain..... 50%
Shelf, fancy..... 55%

BRIGHT WIRE GOODS.
New list..... 70%

BULL RINGS.
Union Nut Co..... 55%
Sargent's..... 60%
Humason, Beckley & Co's..... 60%

BUTTS.
Wrought Brass..... 75%
Cast Brass, Fast Joint..... 20%
Cast Brass, Loose Joint..... 20%
Fast Joint, Narrow..... 45%
Fast Joint, Broad..... 45%
Loose Joint..... 60%
Loose Joint, Japanned..... 60%
Loose Joint, Jap, with Acorns..... 60%
Parliament Butts..... 60%
Mayer's Hinges..... 60%
Loose Pin, no Acorn..... 60%
Loose Pin, Acorns..... 60%
Loose Pin, Acorns, Japanned..... 60%
Loose Pin, Acorns, Jap'd, Plated..... 60%

BUTTS.
Fast Joint, Narrow..... 60%
Fast Joint, Lt. Narrow..... 60%
Fast Joint, Broad..... 60%
Loose Joint, Broad..... 60%
Table Butts, Back Flaps, &c..... 60%
Inside Blind, Regular..... 60%
Inside Blind, Light..... 60%
Loose Pin, Wrt..... 60%
Loose Pin, Light..... 60%

CLIPS, AXLE.
Norway or Best..... 45%
Superior..... 45%
Conestoga..... 45%
Coal Hods—Griffiths..... 40%

COCKS, BRASS.
Racking, new list, July 10, 1880..... 50%
Globe, new list, July 10, 1880..... 50%
Plain Bibbs, new list, July 10, 1880..... 50%
Ale and Beer, new list, July 10, 1880..... 50%

COFFEE MILLS.
Parker's..... 45%
Wilson's..... 45%
Logan & Strobbridge..... 45%
Enterprise Mfg. Co..... 45%

COMPASSES, DIVIDERS, AC.
Compasses..... 55%
Calipers..... 55%

CURRY COMBS.
Fitch's new list..... 50%
Hotchkiss, Novelty, new list, July, 1880..... 25%
Hotchkiss, Excelsior Superior Champion..... 25%
Lawrence, "Perfect"..... 25%
Rubber..... 25%
Sweet & Clarke..... 25%
Lusters..... 25%

CURTAIN PINS.
Silvered Glass..... 25%
White Enamel..... 25%

CUTLERY.
Association (Table)..... 25%
Nautack Cutlery Co..... 25%
Excelsior Knife Co..... 25%
Wilson's Butcher and Shoe Knives..... 25%
Ames' Shoe Knives..... 25%
Wm. Rogers Mfg. Co., Plated Cutlery..... 25%

DOG COLLARS.
Embossed Gilt..... 25%
Leather..... 25%
Brass..... 25%

DOOR SPRINGS.
Torrey's Rod, regular size, 1/2 doz., 3/4 doz., 1 doz..... 40%
Gem (Coil):
No. 1, Large Japanned..... 40%
No. 2, Medium Japanned..... 40%
No. 3, Small Japanned..... 40%
No. 4, "Shoo Fly" Screen door size, 1.50
No. 5, Screen door size..... 2.00
No. 6, Medium..... 2.75
No. 7, Large..... 4.00
Standard—10 doz \$1.25; 9 doz \$1.75..... 50%
8 doz 2.50; 6 doz \$3.50..... 50%
Hercules..... 50%

DRAWING KNIVES.
Ohio Tool Co..... 60%
Crossman's No. 1..... 65%
Nobles Mfg. Co..... 15%
Bradley's..... 35%
Adjustable Handle..... 20%
P. S. & W..... 70%
Douglas..... 70%

DRILLS AND DRILL STOCKS.
Blacksmith's Self-Feeding..... 75%
Breast, P. S. & W..... 20%
Breast, Wilson's..... 20%
Breast, Millers Falls..... 25%
Breast, Bartholomew's..... 25%
Wilson's Drill Stocks..... 25%
Automatic Boring Tools..... 25%

EGG BEATERS.
Dover..... 25%
Medallion..... 25%
Victoria..... 25%

EMERY AND EMERY PAPER.
Regular numbers..... 6c
Flour and F. F..... 4c
B. & A. Emery Paper..... 30%

ENAMELED AND TINNED WARE.
Kettles..... 60%
Sauce Pans..... 40%
Tinned Sauce Pans..... 40%
Escutcheon Pins—BSCUTCHONS..... 50%

DOOR LOCKS.
Same discounts as Door Locks
Brass Thread..... 25%
Wood..... 25%

FAUCETS.
Fenn's..... 40%
Fenn's Cork Stops..... 33 1/2%
Star..... 55%
Frary's Patent Petroleum..... 20%
West's Patent Key..... 45%
Anchor Lock..... 45%
Metallic Key, Leather Lined..... 45%
Cork Lined..... 70%
J. Sommer's Best Metallic Key..... 40%
J. Sommer's Cork Lined, 1st quality..... 50%

FILES.
E. M. Boynton's..... new list, dis 25%
Western File Co..... 45%
Butcher's..... 45%
Moss & Gamble..... 45%
H. Disston & Sons (new list)..... 45%
Heller Bros. Horse Rasps..... 30%
Nicholson..... 30%
New American..... 30%
Union File Co..... 45%
Stubbs, new list..... 75%
3, 10, 50, 4, 88.25 doz 4, 25% off

FLUTING MACHINES.
Knox, 1/2-inch Rolls..... 35%
Knox, 6-inch Rolls..... 35%
Knox, 8-inch..... 35%
Eagle, 3 1/2-inch Roll..... 35%
Eagle, 5 1/2-inch Roll..... 35%
Crown, 1/2-inch, 3/4-inch, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100..... 35%
American, 5-in., 6-in., 7-in., 8-in., 9-in., 10-in., 11-in., 12-in., 13-in., 14-in., 15-in., 16-in., 17-in., 18-in., 19-in., 20-in., 21-in., 22-in., 23-in., 24-in., 25-in., 26-in., 27-in., 28-in., 29-in., 30-in., 31-in., 32-in., 33-in., 34-in., 35-in., 36-in., 37-in., 38-in., 39-in., 40-in., 41-in., 42-in., 43-in., 44-in., 45-in., 46-in., 47-in., 48-in., 49-in., 50-in., 51-in., 52-in., 53-in., 54-in., 55-in., 56-in., 57-in., 58-in., 59-in., 60-in., 61-in., 62-in., 63-in., 64-in., 65-in., 66-in., 67-in., 68-in., 69-in., 70-in., 71-in., 72-in., 73-in., 74-in., 75-in., 76-in., 77-in., 78-in., 79-in., 80-in., 81-in., 82-in., 83-in., 84-in., 85-in., 86-in., 87-in., 88-in., 89-in., 90-in., 91-in., 92-in., 93-in., 94-in., 95-in., 96-in., 97-in., 98-in., 99-in., 100-in..... 35%
Domestic Fluter..... 35%
Geneva Hand Fluter, White Metal, 1/2 doz \$12 dis 25%
Crown Hand Fluter, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100..... 35%
Combined Fluter and Sad Iron..... 35%

FORKS.
Lawson & Brenizer..... 50%
Remington..... 50%
Sheble & Fisher..... 50%

FRY PANS.
Burnished list as follows..... 50%
No..... 1 2 3 4 5 6 7 8
1 doz..... 3.00 3.75 4.25 4.75 5.25 5.75 6.25 6.75

GAUGES.
Marking, Stanley's..... 50%
Marking, Chapin's..... 50%
Wire..... 50%
Wire, Disston's..... 50%
Wire, Wheeler, Madden & Co..... 50%

GIMLETS.
Nail and Spike..... 40%
"Eureka" Gimlets..... 50%
"Diamond" Gimlets..... 50%
Double Cut, Shephardson's..... 50%
Double Cut, Hartwell's..... 50%
Double Cut, Ives..... 50%
Double Cut, Douglas..... 50%
"Reel"..... 33 1/2%
Gimlets..... 33 1/2%

GLUE POTS.
Tinned and Enameled..... 35%
Family, Howe's "Eureka"..... 25%
Family, L. F. & C.'s "Handy"..... 30%

GRINDSTONE FIXTURES.
Sargent's Patent..... 70%
Reading Hardware Co..... 25%

GUN WADES.
Eley's B. E. wads, 11 upwards..... 75%
" " " " 9 and 10..... 3.00
" " " " 7..... 2.25
" " " " 11 upwards..... 2.25
" " " " 9 and 10..... 2.25
" " " " 7..... 2.25

HAMMERS.
Maydole's..... 15%
Hartford Hammer Co..... 25%
Wagon's Tack, Nos. 1, 2, 3, 1.26, 1.50 and 1.75, dis 10%
Warner & Noble's..... 5%
Kip's or Selsor's..... 10%
Verkes & Plumb..... 15%

HANDLES.—Door or Thumb Latches.
Nos..... 1 2 3 4
Per doz..... 1.00 1.10 1.25 1.50..... 55%
Roggin's Latches..... 35%
Bronze Iron Drop Latches..... 10%
Jap'd Store Door Handles—Nuts, 1.25; Plate, 2.00;
no Plate, 1.10..... 10%
Barn Door..... 10%
Wrought Chest..... 65%
Surface Chest..... 55%
Flush Chest..... 55%
Lifting..... 55%
Saw and Plane..... 40%
Lippincott Cross-Cut Saw..... 25%
Hammer and Hatchet..... 25%
Brad Awl..... 25%
Chisel, all kinds..... 25%
Auger, assorted, 1/2 gross..... 45%
Auger, large, 1/2 gross..... 50%
Patent Auger, Ives..... 25%
Patent Auger, Douglas..... 25%
Patent Auger, Swan's..... 1.00 net

HAMMOCK CHAIRS.
White Mountain, per doz..... 35.00
Finished in red, per doz..... 42.00

HANGERS.
Barn Door, old pattern..... 60%
Barn Door, New England..... 60%
Climax (Anti-Friction)..... 50%
Warner's..... 20%
Richard's..... 20%

HATCHETS.
Shingling, Nos. 1 & 2..... 75%
Claw, Nos. 1 & 2..... 75%
Lathing, Nos. 1 & 2..... 75%
Hammond's new list..... 35%
Blood's..... 35%
Hunt's..... 35%
Russell's, low list..... 40%
Cohoes Bench Broad Adzes..... 40%

HAY KNIVES.
"Lightning"..... 25%
Wadsworth's..... 30%

HINGES.
Plate Hinges, 8, 10, 12 in..... 45%
"Providence" over 12..... 45%
Screw Hook, 8, 10, 12 in..... 4 c
And Strap, 14 to 36 in..... 3 c
Crown spring hinges, for screen doors, dis 60%; for
solid doors, single action, dis 45%; for solid
doors, double action, dis 55%
Crown Screen Door Latch..... 55%
Crown Christmas-Tree Holders, 2-inch, 3-inch,
4-inch, 5-inch, 6-inch, 7-inch, 8-inch, 9-inch, 10-inch, 11-inch, 12-inch, 13-inch, 14-inch, 15-inch, 16-inch, 17-inch, 18-inch, 19-inch, 20-inch, 21-inch, 22-inch, 23-inch, 24-inch, 25-inch, 26-inch, 27-inch, 28-inch, 29-inch, 30-inch, 31-inch, 32-inch, 33-inch, 34-inch, 35-inch, 36-inch, 37-inch, 38-inch, 39-inch, 40-inch, 41-inch, 42-inch, 43-inch, 44-inch, 45-inch, 46-inch, 47-inch, 48-inch, 49-inch, 50-inch, 51-inch, 52-inch, 53-inch, 54-inch, 55-inch, 56-inch, 57-inch, 58-inch, 59-inch, 60-inch, 61-inch, 62-inch, 63-inch, 64-inch, 65-inch, 66-inch, 67-inch, 68-inch, 69-inch, 70-inch, 71-inch, 72-inch, 73-inch, 74-inch, 75-inch, 76-inch, 77-inch, 78-inch, 79-inch, 80-inch, 81-inch, 82-inch, 83-inch, 84-inch, 85-inch, 86-inch, 87-inch, 88-inch, 89-inch, 90-inch, 91-inch, 92-inch, 93-inch, 94-inch, 95-inch, 96-inch, 97-inch, 98-inch, 99-inch, 100-inch..... 45%
Rickford Portable Pump..... 45%
American Cake Mixer, No. 6..... 45%
American Tobacco Cutter..... 45%
A. M. Co. Clothes Winger, No. 2 rolls,
10x14, 12x14, 14x14, 16x14, 18x14, 20x14, 22x14, 24x14, 26x14, 28x14, 30x14, 32x14, 34x14, 36x14, 38x14, 40x14, 42x14, 44x14, 46x14, 48x14, 50x14, 52x14, 54x14, 56x14, 58x14, 60x14, 62x14, 64x14, 66x14, 68x14, 70x14, 72x14, 74x14, 76x14, 78x14, 80x14, 82x14, 84x14, 86x14, 88x14, 90x14, 92x14, 94x14, 96x14, 98x14, 100x14..... 45%
Heavy Welded Hook, 8, 10, 12 in, up to 100 lb..... 45%

HOES.
Screw Hook and Eye..... 25%
Wrought Strap & T list, Dec. 20, '77, dis 60%

HORSES.
Planters..... 60%
Riveted Shank..... 60%
Socket..... 60%
Grub..... 60%
Hick's Pat. Solid C. S. Planters..... 60%
Hick's Pat. Solid C. S. Scovill Pattern..... 60%
Hubbard, Bakewell & Co..... 60%

HORSE NAILS.
Ausable: Nos. 5 6 7 8 9 10
Plain, 1/2 in..... 30%
Finish'd, 1/2 in..... 30%
Clint'n, P'n..... 30%
Clint'n, Fin'd..... 30%
Essex, 1/2 in..... 30%
Putnam..... 30%
Saranac..... 30%
Globe..... 30%
N'thw'n..... 30%
Chaplain
Forged, 1/2 in..... 30%
A. C., 1/2 in..... 30%
C. B., 1/2 in..... 30%
Bridgewater..... 30%
New Haven..... 30%
Capewell..... 30%

HORSE SHOES.
Burden..... 30%
R. I. Horse Shoe Co., Perkins' Improved,
Light, Medium and Heavy..... 30%
Mule Shoes..... 30%
Walker's—Forged (Light, Medium and Heavy)..... 30%
Horse..... 30%
Mule..... 30%
Bryden For'd Heel & Toe Horse Shoes, 1/2 in, 3/4 in, 1 in, 1 1/4 in, 1 1/2 in, 1 3/4 in, 2 in, 2 1/4 in, 2 1/2 in, 2 3/4 in, 3 in, 3 1/4 in, 3 1/2 in, 3 3/4 in, 4 in, 4 1/4 in, 4 1/2 in, 4 3/4 in, 5 in, 5 1/4 in, 5 1/2 in, 5 3/4 in, 6 in, 6 1/4 in, 6 1/2 in, 6 3/4 in, 7 in, 7 1/4 in, 7 1/2 in, 7 3/4 in, 8 in, 8 1/4 in, 8 1/2 in, 8 3/4 in, 9 in, 9 1/4 in, 9 1/2 in, 9 3/4 in, 10 in, 10 1/4 in, 10 1/2 in, 10 3/4 in, 11 in, 11 1/4 in, 11 1/2 in, 11 3/4 in, 12 in, 12 1/4 in, 12 1/2 in, 12 3/4 in, 13 in, 13 1/4 in, 13 1/2 in, 13 3/4 in, 14 in, 14 1/4 in, 14 1/2 in, 14 3/4 in, 15 in, 15 1/4 in, 15 1/2 in, 15 3/4 in, 16 in, 16 1/4 in, 16 1/2 in, 16 3/4 in, 17 in, 17 1/4 in, 17 1/2 in, 17 3/4 in, 18 in, 18 1/4 in, 18 1/2 in, 18 3/4 in, 19 in, 19 1/4 in, 19 1/2 in, 19 3/4 in, 20 in, 20 1/4 in, 20 1/2 in, 20 3/4 in, 21 in, 21 1/4 in, 21 1/2 in, 21 3/4 in, 22 in, 22 1/4 in, 22 1/2 in, 22 3/4 in, 23 in, 23 1/4 in, 23 1/2 in, 23 3/4 in, 24 in, 24 1/4 in, 24 1/2 in, 24 3/4 in, 25 in, 25 1/4 in, 25 1/2 in, 25 3/4 in, 26 in, 26 1/4 in, 26 1/2 in, 26 3/4 in, 27 in, 27 1/4 in, 27 1/2 in, 27 3/4 in, 28 in, 28 1/4 in, 28 1/2 in, 28 3/4 in, 29 in, 29 1/4 in, 29 1/2 in, 29 3/4 in, 30 in, 30 1/4 in, 30 1/2 in, 30 3/4 in, 31 in, 31 1/4 in, 31 1/2 in, 31 3/4 in, 32 in, 32 1/4 in, 32 1/2 in, 32 3/4 in, 33 in, 33 1/4 in, 33 1/2 in, 33 3/4 in, 34 in, 34 1/4 in, 34 1/2 in, 34 3/4 in, 35 in, 35 1/4 in, 35 1/2 in, 35 3/4 in, 36 in, 36 1/4 in, 36 1/2 in, 36 3/4 in, 37 in, 37 1/4 in, 37 1/2 in, 37 3/4 in, 38 in, 38 1/4 in, 38 1/2 in, 38 3/4 in, 39 in, 39 1/4 in, 39 1/2 in, 39 3/4 in, 40 in, 40 1/4 in, 40 1/2 in, 40 3/4 in, 41 in, 41 1/4 in, 41 1/2 in, 41 3/4 in, 42 in, 42 1/4 in, 42 1/2 in, 42 3/4 in, 43 in, 43 1/4 in, 43 1/2 in, 43 3/4 in, 44 in, 44 1/4 in, 44 1/2 in, 44 3/4 in, 45 in, 45 1/4 in, 45 1/2 in, 45 3/4 in, 46 in, 46 1/4 in, 46 1/2 in, 46 3/4 in, 47 in, 47 1/4 in, 47 1/2 in, 47 3/4 in, 48 in, 48 1/4 in, 48 1/2 in, 48 3/4 in, 49 in, 49 1/4 in, 49 1/2 in, 49 3/4 in, 50 in, 50 1/4 in, 50 1/2 in, 50 3/4 in, 51 in, 51 1/4 in, 51 1/2 in, 51 3/4 in, 52 in, 52 1/4 in, 52 1/2 in, 52 3/4 in, 53 in, 53 1/4 in, 53 1/2 in, 53 3/4 in, 54 in, 54 1/4 in, 54 1/2 in, 54 3/4 in, 55 in, 55 1/4 in, 55 1/2 in, 55 3/4 in, 56 in, 56 1/4 in, 56 1/2 in, 56 3/4 in, 57 in, 57 1/4 in, 57 1/2 in, 57 3/4 in, 58 in, 58 1/4 in, 58 1/2 in, 58 3/4 in, 59 in, 59 1/4 in, 59 1/2 in, 59 3/4 in, 60 in, 60 1/4 in, 60 1/2 in, 60 3/4 in, 61 in, 61 1/4 in, 61 1/2 in, 61 3/4 in, 62 in, 62 1/4 in, 62 1/2 in, 62 3/4 in, 63 in, 63 1/4 in, 63 1/2 in, 63 3/4 in, 64 in, 64 1/4 in, 64 1/2 in, 64 3/4 in, 65 in, 65 1/4 in, 65 1/2 in, 65 3/4 in, 66 in, 66 1/4 in, 66 1/2 in, 66 3/4 in, 67 in,

LAWN MOWERS.	
Buckeye, Easy and Excelsior, new list.	dis 30 %
LINES.	
Linen Fish.	dis 25 & 10 %
Wire Clothes, Galvanized, 100 feet.	dis 30 %
LOCKS AND LATCHES.	
Cabinet, Eagle.	Changes made in list price
Cabinet, Gaylord.	of some numbers Jan. 1,
Cabinet, Bridgeport.	1881, dis 25 & 2 %
Cabinet, P. & F. Corbin.	dis 40 %
Trunk, new list, Jan. 1, 1881.	dis 15 & 2 %
Yale Lock Co., Flat Key.	dis 40 %
Plate.	dis 33 1/2 & 2 %
DOOR LOCKS, ETC.	
Bradford.	
Norwalk.	
Norwich.	
P. & F. Corbin.	List prices as revised
Russell & Erwin.	Dec. 6th, 60 & 2 %
Mallory, Wheeler & Co.	for cash.
Padlocks—Russell & Erwin.	
Mallory, Wheeler & Co.	dis 45 %
Norwich Lock Manf. Co.	and 25 for cash.
Wm. Wilcox & Co.	
Wm. Wilcox & Co's Plate Locks.	dis 33 1/2 %
Yale Lock Manf. Co's "Standard."	dis 40 %
Romer's.	dis 25 & 40 %
Conestoga.	dis 75 %
Scandinavian, "Norwich."	dis 50 & 10 %
MALLETS.	
Penfield Block Co., Apple, Hickory and	
Lignumvitae.	dis 30 %
MEAT CUTTERS.	
Dixon's (P. S. & W.) Nos. 1 2 3 4.	
Perry's, Nos. 1 2 3 4 5 6 7 8 9 10.	
Each.	dis 13 1/2 %
Woodruff's (P. S. & W.) Nos. 100 150	
Each.	dis 15 %
Hales' Nos. 11 12 13	
Each.	dis 12 1/2 %
Kieser's No. 55.	dis 35 %
Kieser's Gem.	dis 40 %
Kieser's No. 82.	dis 40 %
Kieser's Monarch.	dis 40 %
Beef Shaver, (Enterprise Manf. Co.)	dis 25 %
MOLASSES GATES.	
Stebbins Patterns.	dis 70 & 10 %
Stebbins Genuine.	dis 67 1/2 & 10 %
Stebbins Tinned Ends.	dis 40 & 10 %
Chase's Hard Metal.	dis 50 & 10 %
Self-Measuring, (Enterprise).	dis 20 %
Lincoln's Pattern.	dis 60 & 10 %
Weed's.	dis 15 %
NUTS AND WASHERS.	
Square Nuts.	3 c off list.
Hexagon Nuts.	8 1/2 c off list.
Washers.	7 1/2 c off list.
OILERS.	
Zinc and Tin.	dis 60 & 10 %
Brass and Copper.	dis 50 %
Malleable (Hammer's).	dis 45 %
PINKING IRONS.	
Per dozen.	75 cts. net
PLAITING MACHINES.	
Astor Plaiting Machine.	each \$15, dis 20 %
Crown Plaiting Machine.	dis 25 %
6 in., 10 in., 12 in. each.	
PLANES AND PLANE IRONS.	
Bench, First Quality.	dis 20 %
Bench, Second Quality.	dis 25 %
Molding.	dis 15 %
Bailey's (Stanley R. & L. Co.) New list, Jan.	
1879.	dis 20 & 10 %
The Stanley (S. R. & L. Co.) new list,	
January 1879.	dis 20 & 10 %
Bailey's.	dis 20 & 10 %
Plane Irons, Butcher's.	dis 20 %
Plane Irons, Auburn Tool Co.	dis 20 %
Plane Iron, Ohio Tool Co.	dis 20 %
Plane Irons, Sandusky Tool Co.	dis 20 %
PLIERS AND NIPPERS.	
Button's Patent.	dis 33 1/2 %
Hall's Pat. Compound Lever Cutting Nippers.	
No. 2, 5 in., \$13.50; No. 4, 7 in., \$21, dis 25 %	
Gas Pliers.	dis 50 %
PLUMBS AND LEVELS.	
Disston's.	dis 40 %
Stanley R. & L. Co.'s Pat. Adjustable.	dis 65 & 10 %
Stanley R. & L. Co.'s Non-Adjustable.	dis 65 & 10 %
Chapin's Patent Adjustable.	dis 65 & 10 %
Chapin's Non-adjustable.	dis 65 & 10 %
Standard Rule Co.'s New Adjustable.	dis 65 & 10 %
Standard Rule Co.'s Non-Adjustable.	dis 65 & 10 %
Pocket Levels.	dis 65 & 10 %
RAIL.	
Sliding Door, Wrought Brass.	dis 43 c.
Sliding Door, Bronzed Wrt. Iron.	dis 12 c.
Sliding Door, Iron, Painted.	dis 10 c.
Barn Door.	dis 10 c.
Per 100 feet.	\$2.60 3.60 5.60-dis 10 %
B. D. for N. E. Hangers.	
Small. Med. Large.	
Per 100 feet.	\$2.10 3.70 30 net.
RIVETS.	
Iron and Tinned, new list, Dec. 10, 1881.	dis 40 %
In bulk, new list, Dec. 10, 1881.	dis 45 %
Copper Rivets and Burrs.	dis 45 %
No. 7 8 9 10 11 12 13 14 15	
dis 40 c. 50 c. 54 c. 56 c. 58 c. 60 c. 62 c. 70 c.	
RIVET SETS.	
Stair, Brass.	dis 25 %
Stair, Black Walnut.	dis 60 c. dis 25 %—net
RULES.	
Chapin's.	
Standard.	dis 75 %
Stanley.	dis 40 & 10 %
Stevens & Co.	dis 70 & 10 %
Stevens & Co. Miscellaneous.	dis 50 & 10 %
SAD IRONS.	
Self-Heating, Charcoal.	dis 9.00 net
Mrs. Pott's Irons.	dis 35 %
Enterprise Sad Irons, new list, July 20, '82.	dis 35 %
Comb'd Fluter and Sad Iron.	dis 15 c.
Common Sad Irons.	dis 25 %
SAND PAPER.	
Baeder & Adamson's Flint, 000/1/2, \$4.50 per r.m.	
Baeder & Adamson's Flint, 2, 2 1/2, \$3.50 per r.m.	
Baeder & Adamson's Flint, Assort'd 4 7/8 per r.m.	
Baeder & Adamson's Star.	3 7/8 per r.m.
Baeder & Adamson's Emery per r.m.	\$6.50-dis 11.50
J. Bartle's Sand, Flint and Emery Paper.	dis 30 & 5 %
SASH CORD.	
Common.	dis 14 c. net
Patent.	dis 17 c. net
Silver Braided Lake Hemp.	dis 50 c. dis 10 %
Silver Braid, Lake White Cotton.	dis 50 c. dis 10 %
Silver Braided Lake Drab Cotton.	dis 55 c. dis 10 %
Silver Lake Cable Laid, Bengall Unbleached	
Hemp, 17 cts.	dis 10 %
Russian Hemp, 10 cts.	dis 10 %
Italian Hemp, 34 cts.	dis 10 %
SASH WEIGHTS.	
Solid Eyes, in 500-lb. lots and over.	dis 1 1/2 c. net
SAUSAGE STUFFERS OR FILLERS.	
Miles.	dis 20 c. dis 25 & 5 %
Perry.	dis 20 c. No. 15, No. 0, dis 35 %

Enterprise Mfg. Co.	dis 25 %
Monarch.	dis 40 %
SAWS.	
Boynnton's Lightning Cross Cuts, new list.	dis 40 %
Boynnton's Circular and Mill.	dis 40 %
Boynnton's Ice.	dis 25 %
Boynnton's Lightning Hand, Panel and Rip.	dis 25 %
Disston's Circular.	dis 40 %
Disston's Mill.	dis 40 %
Disston's Cross Cut.	dis 40 %
Disston's Hand, Panel, Rip, &c.	dis 20 %
Hubbard, Bakewell & Co. Circular Saws.	dis 40 & 5 %
Hubbard, Bakewell & Co. Cross Cut.	30 c. ft.
Hubbard, Bakewell & Co., One-Man's, X Cut	
Hubbard, Bakewell & Co., Mill Saws.	dis 40 & 5 %
Peace Circular and Mill.	dis 40 %
Peace Hand, Panel and Rip.	dis 25 %
Peace Cross Cuts.	dis 35 %
Peace Band Saws, all widths.	dis 10 %
Webster Cross Cut, with handles.	dis 25 & 10 & 10 %
Griffin's Hack Saws and Blades.	dis 30 %
SAW FRAMES.	
White.	dis 10 c. dis 10 %
Saw Rods.	dis 10 c. list, dis 10 & 10 %
SAW SETS.	
Stillman's Genuine, 1/2 doz \$3.50 and \$5.50.	dis 10 %
Stillman's Imitation.	dis 10 %
Common Lever.	dis 10 %
Hammer, Hotchkiss.	dis 15 %
Aiken's Genuine.	dis 13 c. dis 10 %
Aiken's Imitation.	dis 10 %
Disston's.	dis 20 %
Morrill's.	dis 15 %; No. 5, \$5; dis 35 & 10 %
SCALES.	
Hatch, Counter, No. 171.	dis 42 c. dis 37 1/2 & 10 %
Hatch, Tem, No. 161.	dis 45 c. dis 37 1/2 & 10 %
Union Platform, Keystone.	dis 45 %
Chicago Scale Co.	Special dis
Fairbanks.	dis 20 %
Forsyth Scale Co.	dis 45 %
Howe's.	dis 20 & 10 %
Chatillon's Grocers.	dis 40 %
Chatillon's Eureka.	dis 25 %
Family Universal.	dis 50 %
Family Favorite.	dis 30 %
Family Turnbull's.	dis 30 %
Scale Beams, List of Jan. 12, 1882.	dis 50 %
SCRAPER.	
Adjust. Box Scraper (S. R. & L. Co.) \$6.50, dis 20 & 10 %	
Box, 1 Handle.	dis 10 %
Box, 2 Handle.	dis 10 %
Foot.	dis 10 %
Ship, common.	dis 10 %
Wilson Mfg. Co.	dis 10 %
SCREW DRIVERS.	
Douglas Mfg. Co.	dis 20 & 10 %
Disston's.	dis 40 %
Cowles Mfg. Co.	dis 50 & 10 %
Stanley Rule & Level Co's. Var. Hds.	dis 50 & 10 %
Stanley Rule & Level Co's. Black Hds.	dis 40 & 10 %
Ratchet.	dis 33 1/2 %
Clark's Patent.	dis 25 %
Shepardson.	dis 25 %
SCREWS.	
Flat Head Iron, list Jan. 1, '85.	dis 80 %
Round Head Iron.	dis 75 & 10 %
Flat Head Brass.	dis 75 %
Round Head Brass.	dis 75 %
Flat Head Blued, add 2 1/2 % to net of invoice.	
Brass and Silver Capped.	dis 40 %
Japanned, list of Plain Screws.	dis 7 1/2 %
Coach, Patent Gimlet Point.	dis 75 %
Coach, Common or Lag.	dis 60 & 10 & 10 %
Bed.	dis 10 %
Machine, Flat Head, Iron.	dis 55 %
Machine, Round Head, Iron.	dis 50 %
Bench, Iron.	dis 50 & 10 %
Bench, Wood, Beach.	dis 30 c. dis 10 %
Bench, Wood, Hickory.	dis 20 & 10 %
Hand, Wood.	dis 20 & 10 %
Hand Rail, Sargent's.	dis 60 & 10 %
Hand Rail, Humason, Beckley & Co's.	dis 40 & 10 %
Hand Rail, Am. Screw Co., list Jan. 1, '81.	dis 70 %
Jack (Wilson's).	dis 25 %
SCREEN FRAMES AND FIXTURES.	
Standard Window Screens No. 1, \$4; No. 2, \$5	
Door.	dis 40 & 10 %
Window Corner Iron, No. 3, dis 25 %	
Door.	dis 40 & 10 %
Door Latches, 1/2 dozen, \$3.60.	dis 50 %
Porter's Patent Window and Door Screen Frames:	
In White. Walnut.	
No. 20.	dis 75 %
No. 21.	dis 25 %
No. 22.	dis 50 %
No. 23.	dis 60 %
No. 30.	dis 90 %
Porter's Corners—	
No. 0. Corners and Sticks complete for a	
three-foot window, 1/2 doz sets.	\$4
No. 1. Set for Window, 1/2 doz sets Bronzed,	
No. 1 1/2. " " " " " " " " " " " "	\$2.40; Nickel, \$5.60
No. 4. " " " " " " " " " " " "	\$3.25; Nickel, \$7.50
No. 5. " " " " " " " " " " " "	\$4.00; Nickel, \$8.00
No. 6. " " " " " " " " " " " "	Bronzed, \$1.20; Nickel, \$3.00
No. 4 1/2. " " " " " " " " " " " "	or Door, 1/2 doz sets,
No. 4 1/2. " " " " " " " " " " " "	Bronzed, \$2.00; Nickel, \$4.00
No. 2 1/2. " " " " " " " " " " " "	Door, 1/2 doz sets, Bronzed,
No. 3. " " " " " " " " " " " "	\$6.75; Nickel, \$15.00
No. 3. " " " " " " " " " " " "	1/2 doz sets, Bronzed,
No. 3. " " " " " " " " " " " "	\$12.00; Nickel, \$24.00
SHEARS AND SCISSORS.	
American (Cast) Iron.	dis 70 & 10 %
Pruning.	dis 70 & 10 %
Barnard's Lamp Trimmers.	dis 40 c. \$4.00
Tinners.	dis 15 %
Conn Shears.	dis 80 %
Norfolk Shear Co.	dis 75 %
Jersey Shears.	dis 80 %
J. Wiss & Son, Nickel, 50 & 5 %; Japanned, 60 & 5 %	
SHOVELS.	
Sliding Door, M. W. & Co., List.	dis 45 & 2 %
Sliding Door, R. & E. list.	dis 60 & 10 & 10 %
Sliding Door, Patent Roller.	dis 60 & 10 & 10 %
Sliding Door, Pt. Roller, Hatfield's.	dis 60 & 10 & 10 %
Sliding Door, Russell's Anti-Friction.	dis 60 & 10 & 10 %
SHOVELS AND SPADES.	
Ames, New List, July 1, 1881.	dis 15 %
Griffiths.	dis 50 & 5 %
Remington's (Lowman's Patent).	dis 30 %
Rowland's.	dis 60 %
Kimball's.	dis 35 %
Lippincott, new list.	dis 20 %
Hussy, Bins & Co.	dis 15 %
SPOKE TRIMMERS.	
Bonney's.	dis 10 c. dis 40 & 5 %
Stearns.	dis 10 c. dis 20 & 10 %
Ives.	No. 1, \$15; No. 2, \$12 1/2 doz, dis 55 & 10 %
Douglass.	dis 15 %
SILVER PLATED WARE.	
Wm. Rogers Manf. Co.	dis 50, 5 & 5 %
Holmes, Booth & Hayden.	dis 40 & 10 & 5 %
Brown Bros.	dis 40 & 10 & 5 %
Wallace's Steel Silver Plated.	dis 33 1/2 & 10 %
Rogers Bros 1847.	dis 50 %
C. Rogers & Bro.	dis 40, 10 & 5 %

SILVER PLATED HOLLOW WARE.	
Wm. Rogers Manf. Co.	dis 40, 15 & 5 %
Meriden Britannia Co.	dis 33 1/2 %
SPOONS.	
Britannia.	dis 60 & 10 %
Tinned, Iron, Table and Tea.	dis 65 %
Tinned Iron Basting.	dis 65 %
German Silver.	dis 40 %
STONE.	
Hindustan No. 1, 5c; Axe, 8c.	net
Sand Stone.	dis 10 c. dis 33 1/2 & 10 %
Washita Stone.	No. 1, 1/2 lb., 16c. net
Washita Stone, Slip.	No. 1, 1/2 lb., 45c. net
Arkansas.	\$1.50 1/2 lb. net
SQUARES.	
Steel.	dis 50 %; full cases, dis 50 & 10 %
Iron.	dis 50 %; full cases, dis 50 & 10 %
Nickel Plated.	add \$2.50 & 1/4 doz net.
Try Square and T Bevels.	dis 50 & 10 %
Disston's Try Square and T Bevels.	dis 40 %
TACKS, BRADS, &c.	
New List, Sept. 1, 1882.	
Tinned Swedes Tacks.	dis 30 %
Tinned American Tacks.	dis 30 %
Swedes Tacks, all kinds.	dis 30 %
American Cut Tacks.	dis 30 %
Copper Tacks and Nails.	dis 30 %
Hungarian Nails.	dis 35 %
Gimp and Lace Tacks.	dis 30 %
Finishing Nails.	dis 25 %
Trunk and Clout Nails.	dis 25 %
Common and Patent Brads.	dis 20 %
Basket Nails.	dis 20 %
Brush Tacks.	dis 20 %
Leathered Carpet Tacks.	dis 20 %
Cigar Box Nails.	dis 20 %
Chair Nails.	dis 20 %
Double-pointed Tacks.	dis 40 & 5 %
TAP BORERS.	
Common and Ring.	dis 20 %
Ives' Tap Borers.	dis 15 & 10 %
Enterprise Mfg. Co.	dis 25 %
TOBACCO CUTTERS.	
Enterprise Mfg. Co. (Champion).	dis 25 %
Wood Bottom.	dis 12 c. dis 40 & 5 %
All Iron.	dis 10 c. dis 40 & 5 %
Wilson's.	dis 35 %
THERMOMETERS.	
Tin Case.	dis 75 & 10 %
Storm Glasses.	\$3.25 doz.
TOE CALKS.	
Winsted.	dis 9 c. dis 5 %
TRAPS.	
Game, Newhouse.	dis 35 %
Game, Oneida Pattern.	dis 60 & 10 %
Game, Blake's Patent.	dis 40 & 10 %
Mouse, Wood, Choker.	dis 10 c. dis 10 %
Mouse, Round Wire.	dis 10 c. dis 10 %
Mouse Cage, Wire.	dis 10 c. dis 10 %
Mouse, Catch-em-alive.	dis 10 c. dis 10 %
Cyclon Mouse.	dis 75 cts.
Ideal Mouse.	dis 10 c. dis 10 %
Rat, "Decoy."	dis 10 c. dis 10 %
Delusion Mouse, per doz.	\$1.50
TROWELS.	
Lothrop's Brick and Plastering.	dis 25 %
Reed's Brick and Plastering.	dis 15 %
Disston's Brick and Plastering.	dis 20 %
Clement & Maynard's.	dis 20 %
Worrall's Brick.	dis 20 %
Brades & Walby's.	dis 20 %
Garden.	dis 55 %
TRUCKS (WAREHOUSE, &c.)	
Handy Truck.	\$2.50 net
Penfield Block Co.' list, 1882.	dis 35 %
Peerless, with Cogs, No. 3.	dis 54.00
Peerless, with Cogs, No. 4.	dis 66.00
Eureka, No. 2.	dis 42.00
VISES.	
Solid Box—Wilson's.	dis 50 %
" Trenton.	dis 45 %
" Iron City Tool Works.	dis 50 %
Bench—Wilson's.	dis 45 %
" Trenton.	dis 25 %
" Parker's.	dis 20 %
" Prentiss.	dis 25 %
" Bonney's.	dis 35 %
Well Wheels.	dis 60 & 10 & 10 %

WIRE.	
Brass and Copper, list of Jan. 17, 1884.	dis 15 %
Bright and Annealed.	Nos. 0 to 18, dis 50 & 10 %
Bright and Annealed.	Nos. 19 to 26, dis 60 & 10 %
Bright and Annealed.	Nos. 27 to 36, dis 70 %
Coppered.	Nos. 0 to 18, dis 50 %
Galvanized, Nos. 0 to 18.	Market list dis 40 %
Tinned Broom Wire, Nos. 18 to 25.	dis 60 %
Tinned Broom Wire, Nos. 26 to 36.	dis 55 %
Annealed Fence, Nos. 8 & 9.	dis 55 %
Annealed Fence, Nos. 10 to 14.	dis 50 & 10 %
Fence Staples, Galvanized.	dis 70 & 7 1/2 %

TIRRILL'S EQUALIZING GAS MACHINE!

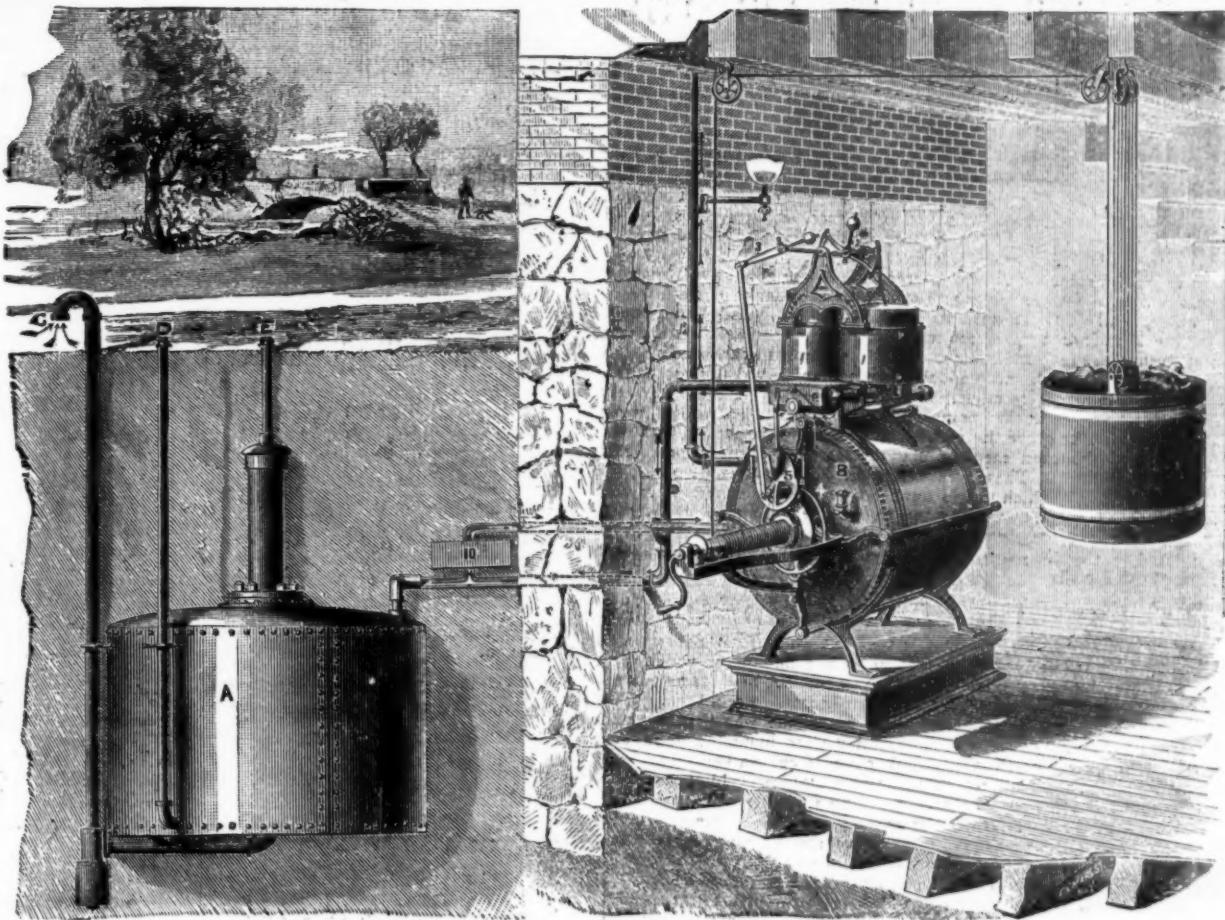
Only Gas Machine
that makes

**UNIFORM
GAS.**

No Fire,
No Smoke,
No Smell.

Plain Bat Wing
Burners only
Required.

GAS ALWAYS
Perfect.



Less than \$1.
Per Thousand
Feet.

Machines of any
CAPACITY.

Read Circulars
Before Buying.

Simple,
Perfect,
and Reliable.

**Absolutely
Safe.**

Approved by
Underwriters.

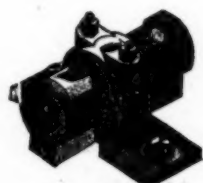
Read who en-
dorses Them.

FOR CIRCULAR AND FULL INFORMATION, ADDRESS:

TIRRILL'S GAS MACHINE CO., 39 Dey St., New York, N. Y.



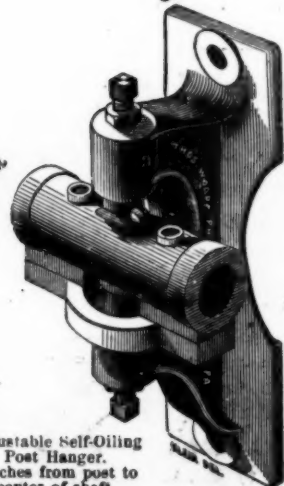
ADJUSTABLE SELF-OILING HANGER.



Ball and Socket
Self-Oiling Pillow Block.



DOUBLE-BRACED ADJUSTABLE
SELF OILING HANGER.



Adjustable Self-Oiling
Post Hanger.
6 inches from post to
center of shaft.

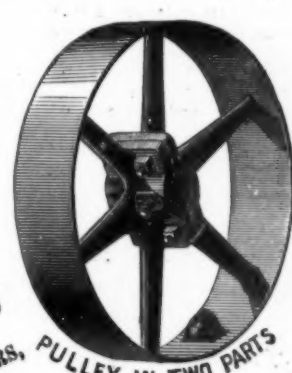
FAIRMOUNT MACHINE WORKS.
Office, 2106 Wood St., Philadelphia.
THOMAS WOOD,
Manufacture as Specialties

Power Looms, Patent Bobbin or Quill
Winding Machines, Plain and Presser
Hemming Machines, Planes, Reeling,
er, Spooling, Machines, Sizing,
Warp Splitting, Filling and Cal-
endering Machines.

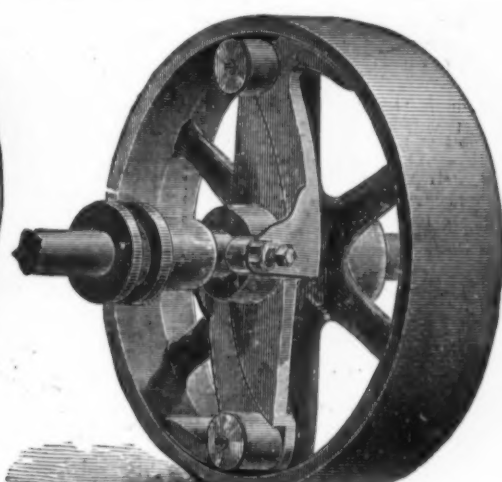
WARPING MILLS,
16, 18 and 20 yards Circumference,
WITH IMPROVED HECKS.

SHAFTING,
With Patent
ADJUSTABLE SELF-OILING HANGERS,
8, 10, 12, 15, 18, 20, 24 and 30 in. drop.

Also WALL, POST AND GIRDER HANGERS.
Pulleys, from 4 inches to 10 ft. in diam:er.
PATENT FRICTION PULLEY.
Pulleys in two parts, any size required.
PATENT HOISTING MACHINES.
Oil Presses for Lard, Fish and Paraffine.



PULLEY IN TWO PARTS



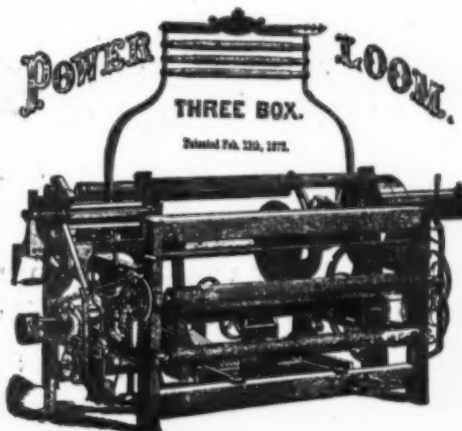
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MUST BE SOLD FOR DIVISION.

A Fine Orange Grove.

The most desirable piece of property on Indian River, in South Florida, is now offered for sale, in order to bring about a division, one of the owners having died. The locality is famous for producing the best, the largest, and most delicious sweet oranges, pineapples and other tropical fruits, as well as the most succulent vegetables of all kinds in the State. The property contains over 400 acres of the most fertile and productive lands to be found in tropical Florida or elsewhere.

There are about twenty-five acres set in orange trees, which are now in full bearing. The tract is about equally divided by a creek, which affords an abundance of fresh water. Ducks, geese, and game of all sorts, as well as fish exist in inexhaustible numbers. Near the mouth of the creek, in Indian River, are immense beds of the finest and largest, as well as best flavored oysters in the United States. This tract fronts nearly one mile on Indian River, the banks being very high and gradually sloping back from the river, affording the best protection from the winds from off the Atlantic ocean, which are not very frequent in that latitude. The river at this point is two and a half miles wide. From the top of a very high mound in the grove the ocean can be seen. Connected with this grove is a nursery of about ten thousand seedling orange trees, from two to three years old, in a healthy and thrifty condition. These trees sell readily for \$1.25 each.

On the south side of the creek, which is two hundred yards wide, where it empties into Indian river, are about two hundred acres of the finest pineapple land in Florida. The entire tract can be easily divided up into smaller farms if a company should purchase for that purpose. The locality is entirely free from malarial diseases, and is without doubt the most attractive section of Florida.

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This property is situated on the famous Lake Jessup, ten miles from Sanford, and one and a half from Salary's Wharf, and consists of 16 acres of pine land on which there is a five-acre grove, just coming into bearing. The improvements—A new framed dwelling house, with brick chimneys, kitchen and all necessary out-houses. Are all new. This is the home place. In a half mile of the dwelling, and nearer the wharf, is the main grove, now in full bearing, which consists of 30 acres of first-class hummock land, with about twenty acres set in the grove, which is in a high state of cultivation. The trees were set in 1868—sixteen years ago. The present crop of oranges was sold at the grove, the purchaser gathering them, at \$2.00 per box, and it is estimated at about 2,000 boxes. It is reasonable to suppose that the crop for the present year will be double that of the past year, as the grove has doubled its bearing for several successive years, and by actual observation it has been demonstrated that orange trees continue to increase their bearing up to 40 or even 50 years when well and properly cultivated. In addition, if desired, can be bought with the above described property, 35 acres of very rich black hummock, in half a mile of Salary's Wharf, which is high and dry. These properties can be bought at a very low figure, less than half their present real value.

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The other tract contains 46 acres, and has a river frontage of one acre wide, running back, eight acres long, to where there is an excellent grove of 17 acres, that will soon come into bearing, with one and a half acres in full bearing; and on the river front, 40 well-developed trees, in full bearing.

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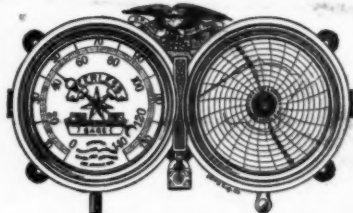
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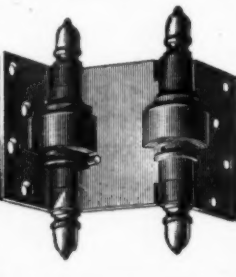
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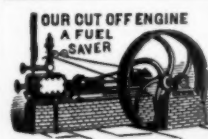
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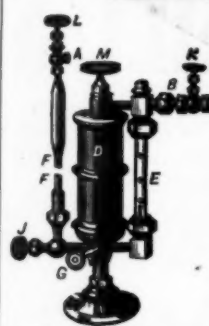


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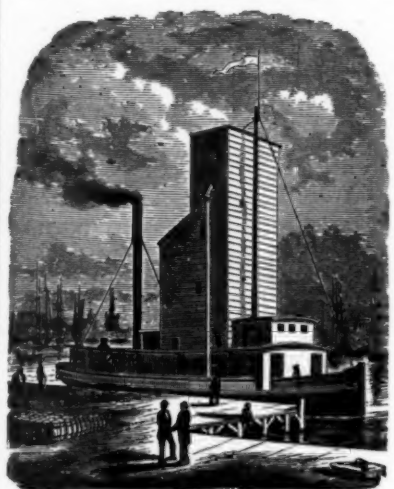
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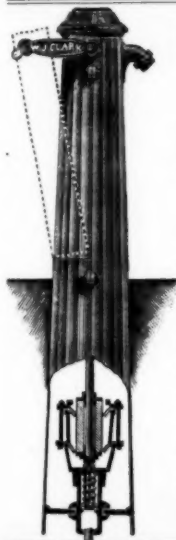
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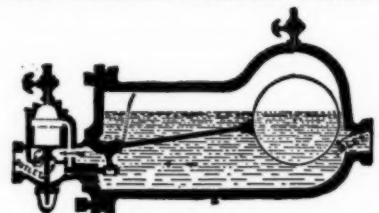
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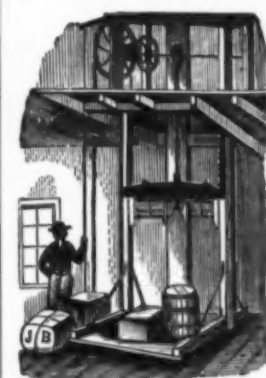
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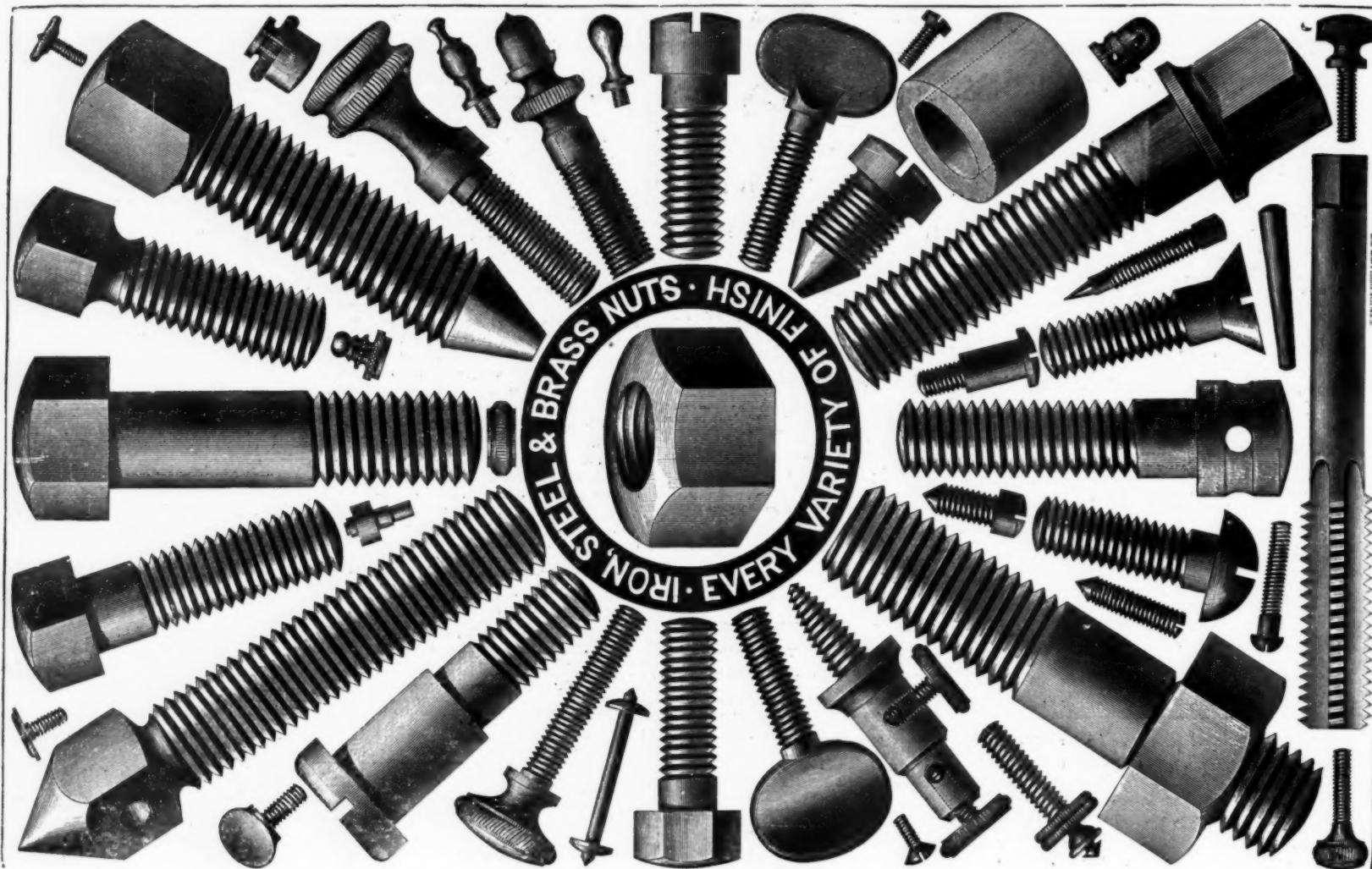
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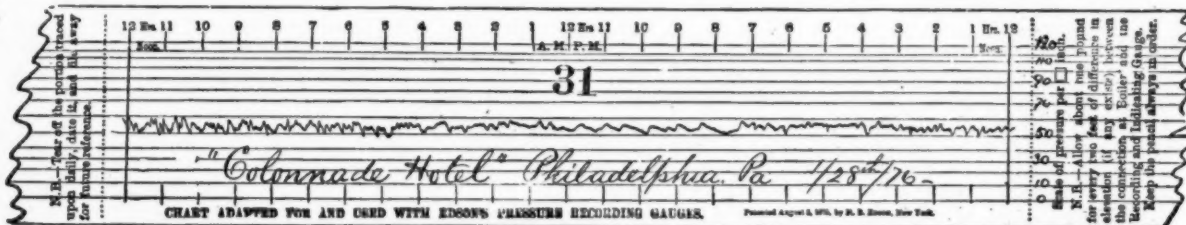
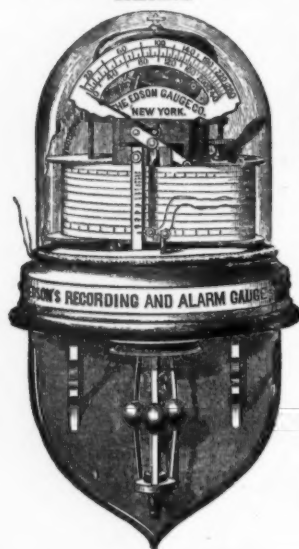
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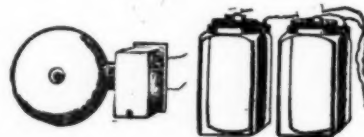
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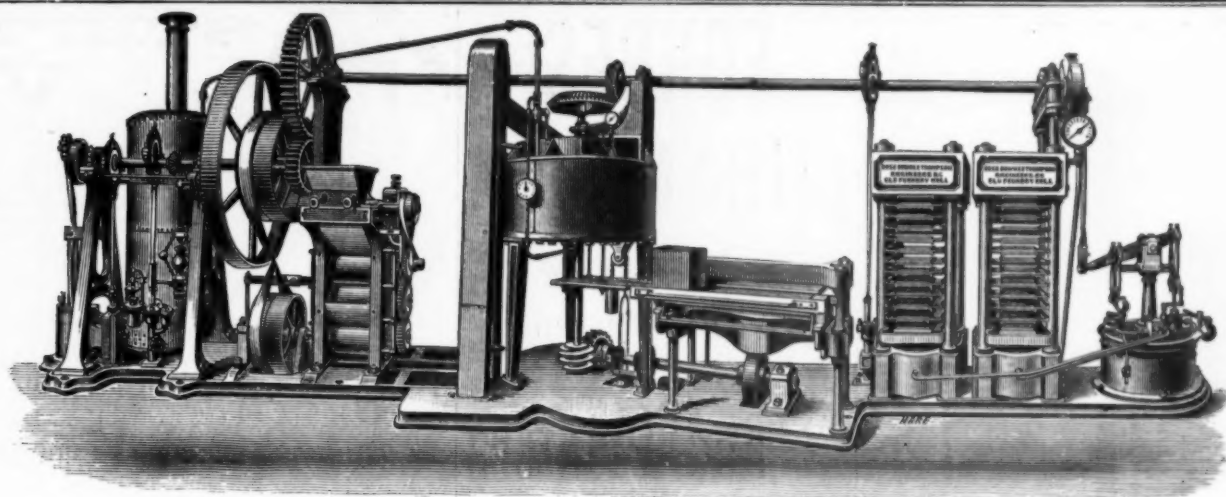
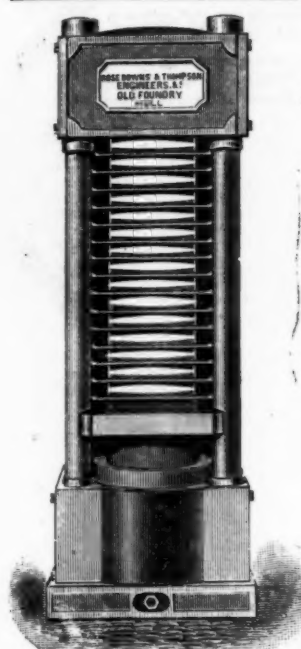
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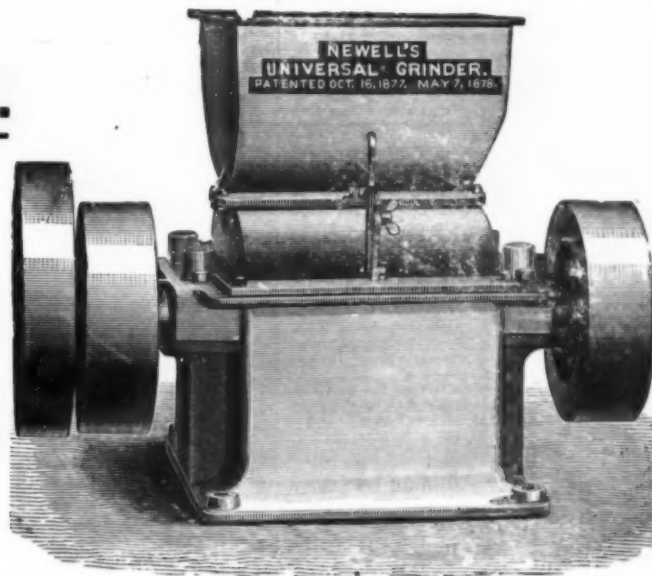
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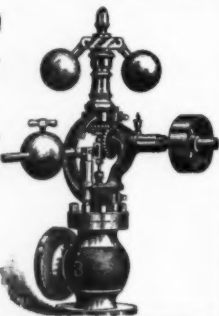
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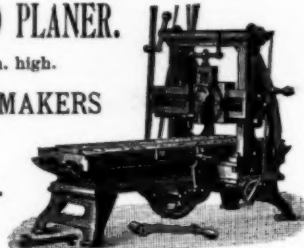
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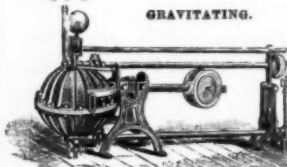
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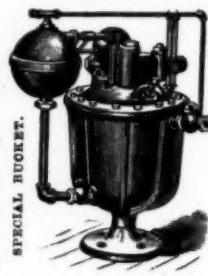


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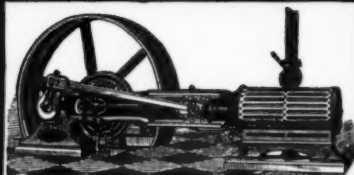
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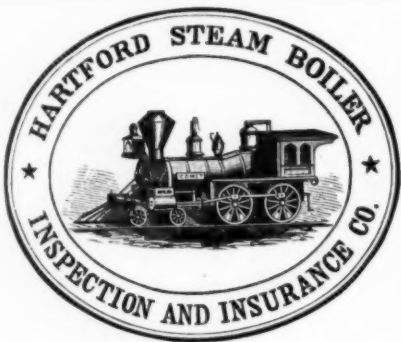
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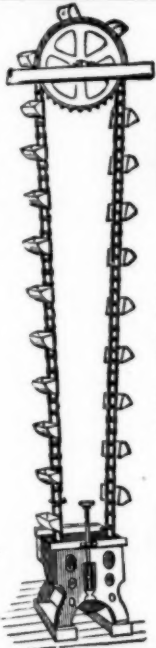
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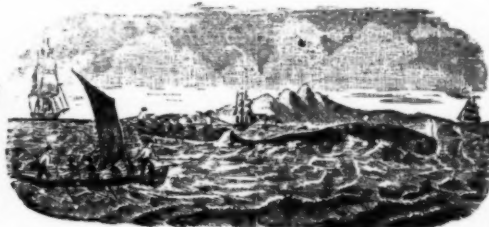
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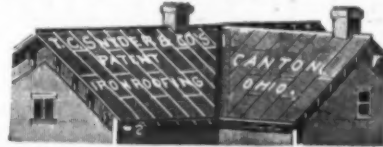
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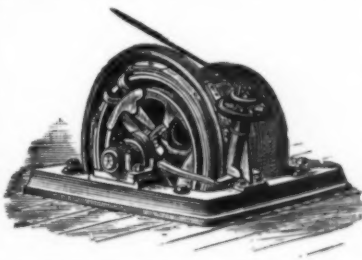
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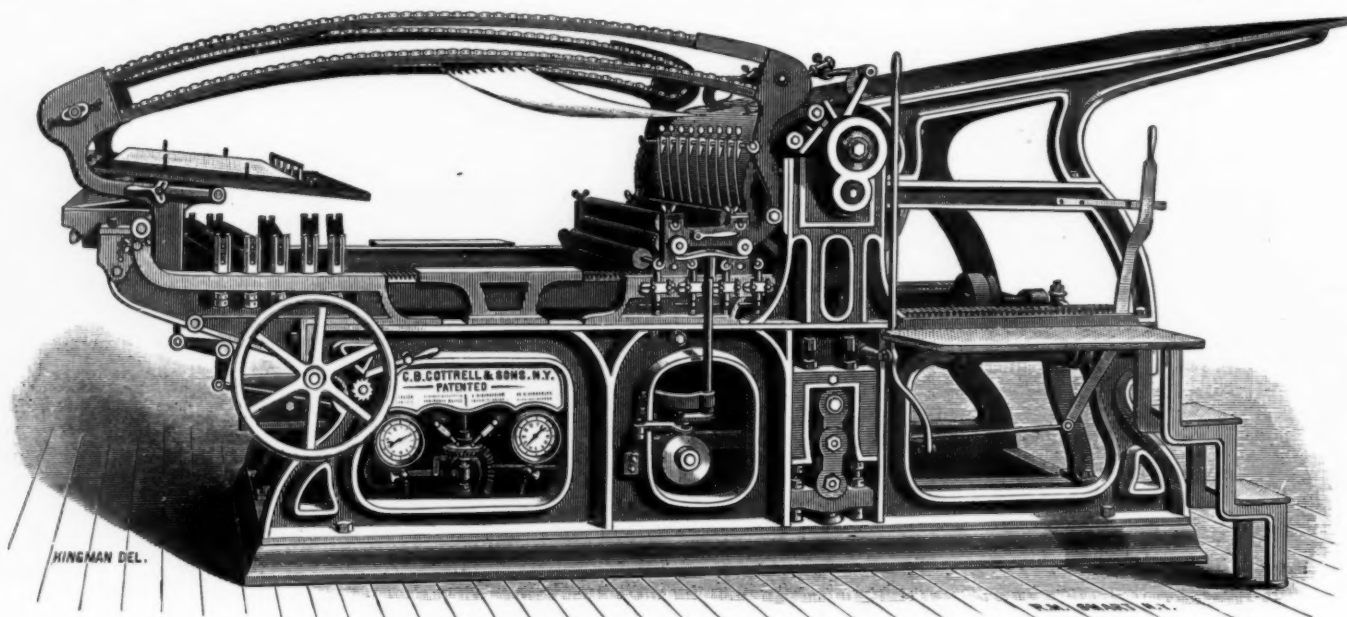


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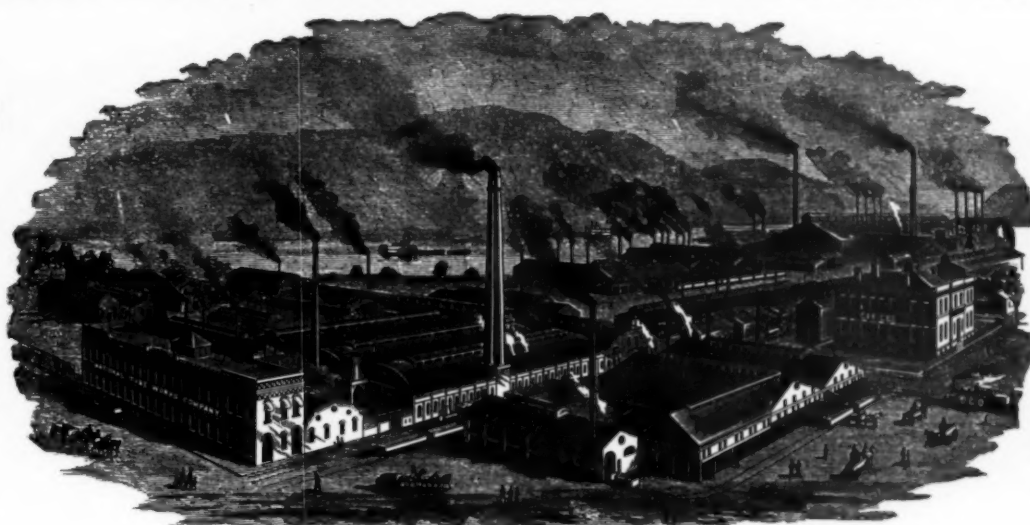
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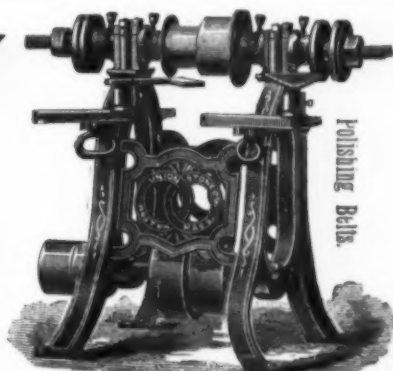
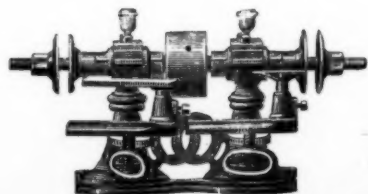
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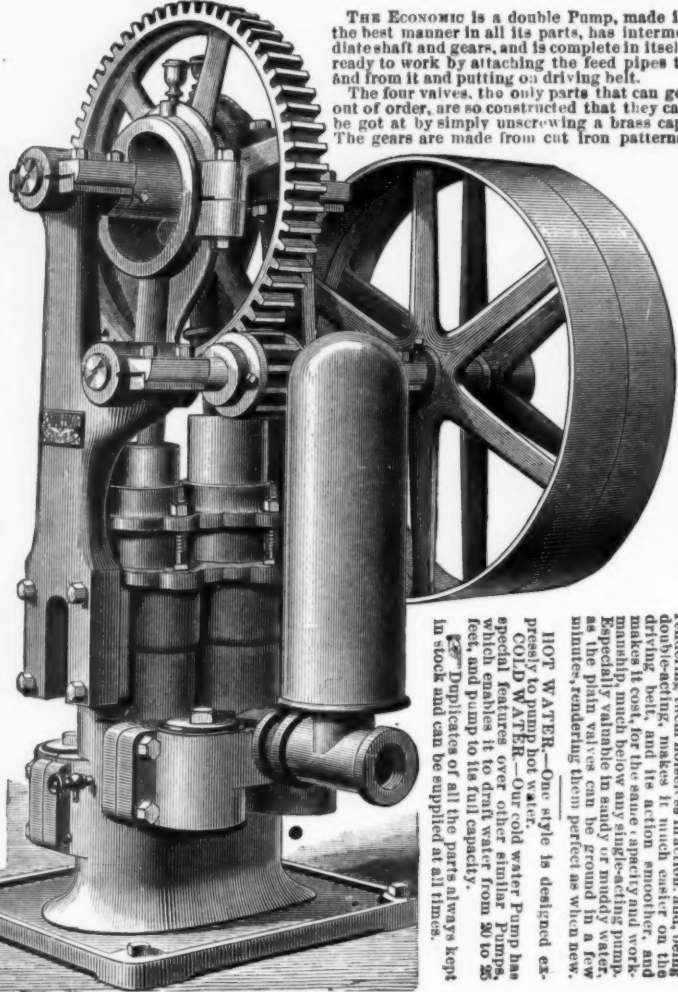


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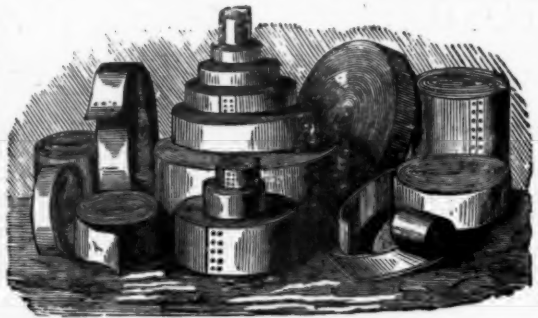
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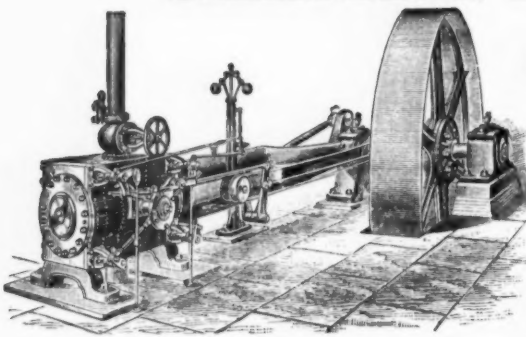
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